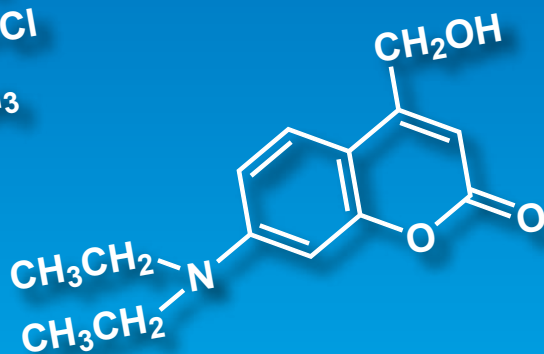
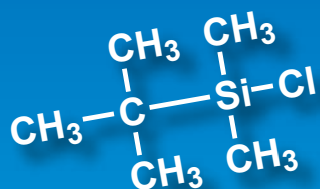
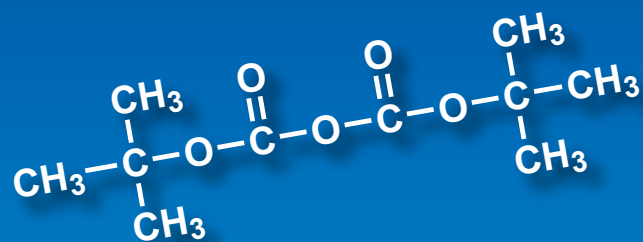


保護試薬

Protecting Agents



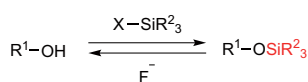
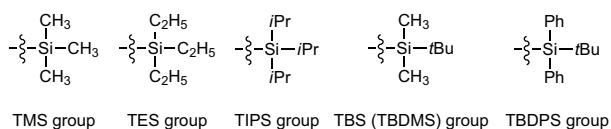
保護試薬

有機合成において、複数の官能基を持つ化合物のある官能基のみを選択的に反応させたい場合、一時的に他の反応性の高い官能基を不活性な官能基に変換し、「保護」しておく必要があります。そのため、保護剤を有効に利用することは、合成戦略上、非常に重要です。有用な保護剤は、保護したい官能基と選択的に反応し、高い収率で保護基が導入できること、保護基の導入された部分が種々の反応に安定であること、加えて一定の条件下で選択的に脱保護が行えることが必要です。特に複雑な化合物の合成では、保護基の選択や脱保護の順序などの戦略が鍵となる場合も多いため、より幅広い種類の保護剤が望まれています。

以下に、弊社で取り扱っている種々の保護剤を脱保護の観点から分類し、掲載いたしました。有機合成研究の一助としてお役立てください。

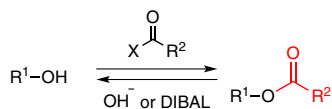
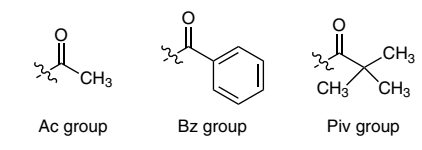
●シリル化剤

シリル基は、ヒドロキシ基の保護に最もよく用いられる保護基ですが、カルボキシ基やアミノ基などの保護にも用いられます。保護基としてトリメチルシリル(TMS)基やトリエチルシリル(TEES)基のほか、かさ高いシリル基としてトリエチルシリル(TIPS)基、*tert*-ブチルジメチルシリル(TBSもしくはTBDMS)基、*tert*-ブチルジフェニルシリル(TBDPS)基などがよく用いられます。シリル基の脱保護は、酸性条件下での加水分解あるいはフッ素アニオンによる方法が一般的です。



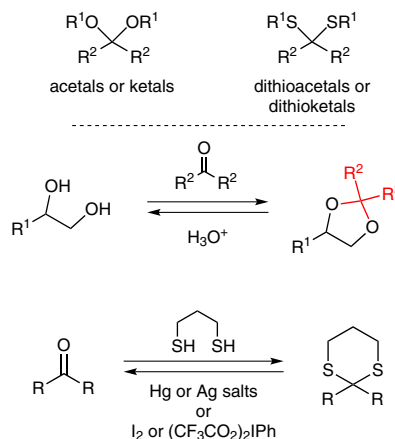
●アシル化剤

アシル系保護基は、ヒドロキシ基やアミノ基などの保護に用いられ、アセチル(Ac)、ベンゾイル(Bz)、ピバロイル(Piv)基などがよく用いられています。ピバロイル基はかさ高いため、立体障害の小さいヒドロキシ基の選択的保護にも用いることができます。一般的に酸性条件や酸化条件に安定で、脱保護は塩基性条件や還元条件(DIBAL、LAHなど)下で行われます。



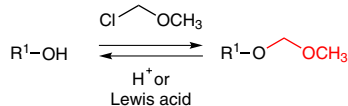
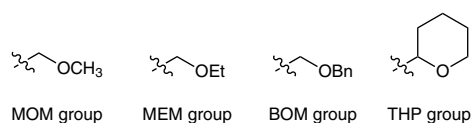
●アセタール化剤・チオアセタール化剤

アセタールおよびチオアセタールは、ヒドロキシ基やチオール基の保護基として、またアルデヒドやケトンのカルボニル基の保護基として用いられています。酸性条件下、アルコールやチオールとカルボニル化合物を反応させることにより保護基が導入されます。アセタールは塩基性条件、還元条件、有機金属試薬などの求核試剤などに対して安定で、酸加水分解により脱保護されます。チオアセタールは通常、酸性および塩基性水溶液のどちらに対しても安定で、水銀塩や超原子価ヨウ素化合物を用いて脱保護されます。



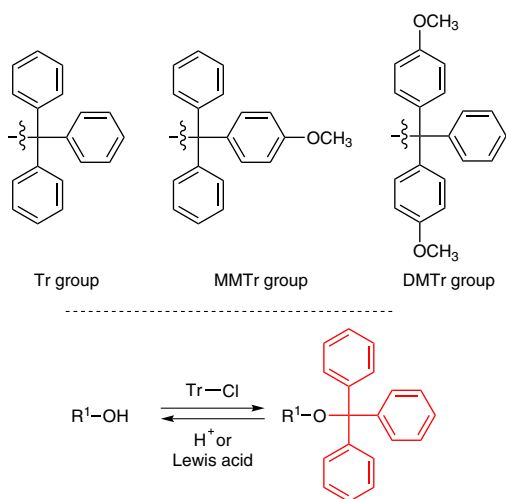
●アルコキシメチル化剤

メトキシメチル(MOM)基などのアルコキシメチル基は、一般的にヒドロキシ基の保護基として用いられます。保護した形がアセタール構造となるため、塩基や還元剤に対して安定です。脱保護は酸触媒による加水分解により行われます。



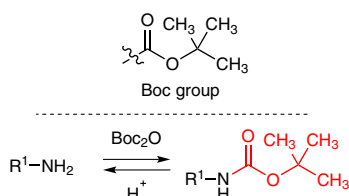
● Tr 化剤

トリチル(Tr)基は、主にヒドロキシ基の保護基として用いられます。かさ高い保護基であるため、立体障害の小さい基質の選択的保護も可能です。塩基、酸化剤、還元剤、求核剤に対して比較的安定で、酸性条件下で脱保護が可能です。



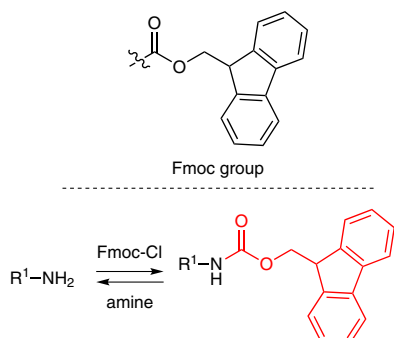
● Boc 化剤

tert-ブトキシカルボニル(Boc)基は、ペプチド合成などの際に最もよく用いられるアミノ基の保護基の1つで、ヒドロキシ基の保護に用いられる場合もあります。塩基性加水分解条件、接触還元条件や種々の求核試薬などに対して安定です。一般的にトリフルオロ酢酸などの酸性条件下で脱保護されます。



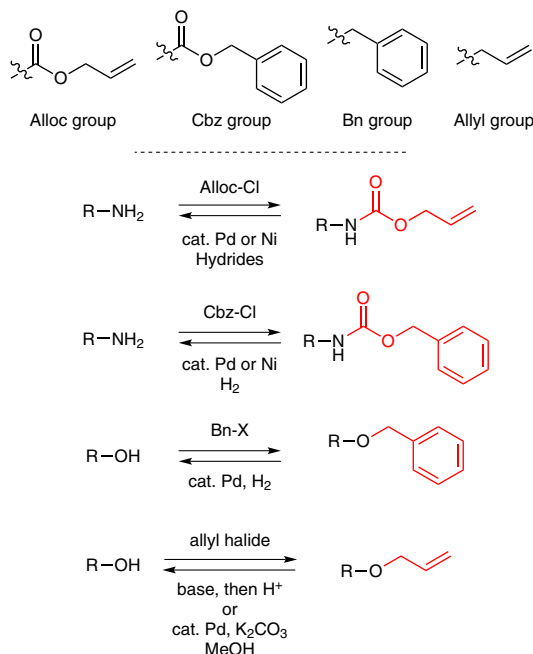
● Fmoc 化剤

9-フルオレニルメチルオキシカルボニル(Fmoc)基は、Boc基とともにペプチドの固相合成などの際に最もよく用いられるアミノ基の保護基の1つです。ピペリジンなどのアミンにより速やかに脱保護されます。酸性条件には安定であるため、Fmoc基存在下でBoc基などを選択的に脱保護することが可能です。



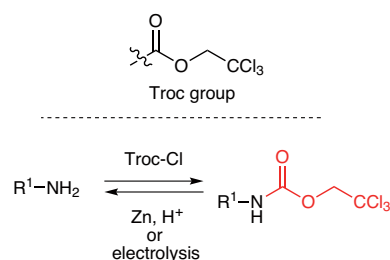
● Alloc 化剤・Cbz 化剤・Bn 化剤・アリル化剤

アリルオキシカルボニル(Alloc)基、ベンジルオキシカルボニル(Cbz)基はアミノ基の保護基として、ベンジル(Bn)基、アリル基はヒドロキシ基の保護基としてよく用いられています。これらは一般的にパラジウム触媒を作用させることにより脱保護されます。



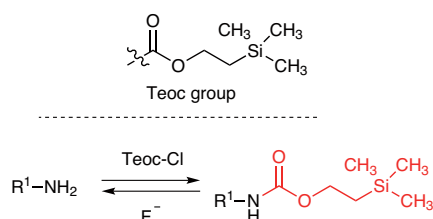
● Troc 化剤

2,2,2-トリクロロエトキシカルボニル(Troc)基はヒドロキシ基やアミノ基の保護基として用いられます。脱保護は、一般的に亜鉛粉末や電気分解による方法が用いられます。



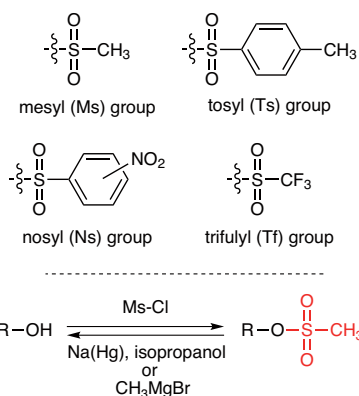
● Teoc 化剤

2-(トリメチルシリル)エトキシカルボニル(Teoc)基はアミノ基の保護基として用いられ、TBAF等のフッ素アニオンにより室温で脱保護されます。



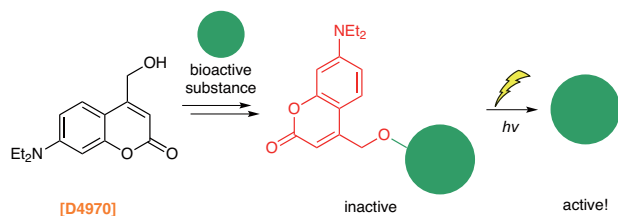
●スルホニル化剤

各種スルホニル基は、水酸基と反応して活性化させるだけでなく、水酸基やアミノ基の保護基としても用いられます。



●光分解性保護試薬

D4970などの光分解性保護基は、生理活性物質のヒドロキシ基、アミノ基、リン酸基などと反応してケージド(Caged)化合物を与えます。ケージド化合物は光分解性保護基によって不活性化された小分子のことで、生体内に取り込まれた後、紫外可視光を照射すると脱保護されて活性を発現します。この特性により、光による局所的な活性の制御が可能となります。これまでに、ヌクレオチド、アミノ酸、ビオチンや糖から誘導されたケージド化合物が合成され、それらの応用が数多く報告されています。



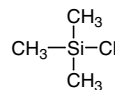
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- A. Isidro-Llobet, M. Alvarez, F. Albericio, *Chem. Rev.* **2009**, 109, 2455.
- M. Schelhaas, H. Waldmann, *Angew. Chem. Int. Ed.* **1996**, 35, 2056.
- K. Jarowicki, P. Kocienski, *Contemp. Org. Synth.* **1997**, 4, 454.

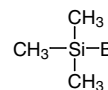
シリル化剤

トリメチル
シリル
(TMS) 化剤

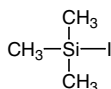
C0306 25mL 100mL 500mL

Chlorotrimethylsilane
CAS RN: 75-77-4

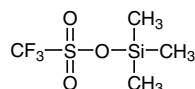
B1087 5mL 25mL 250mL

Bromotrimethylsilane
CAS RN: 2857-97-8

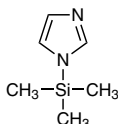
I0308 5g 25g

Trimethylsilyl Iodide
CAS RN: 16029-98-4

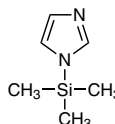
T0871 5g 25g 250g

TMSOTf
CAS RN: 27607-77-8

T0585 25g 100g

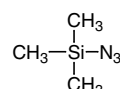
SIM
CAS RN: 18156-74-6

T0623 12mL

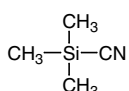


SIM (in Anhydrous Pyridine)

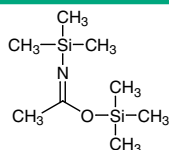
T0801 5g 25g 100g

Trimethylsilyl Azide
CAS RN: 4648-54-8

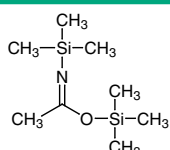
T0990 25mL 100mL 500mL

Trimethylsilyl Cyanide
CAS RN: 7677-24-9

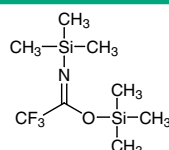
B0511 10mL 100mL

BSA
CAS RN: 10416-59-8

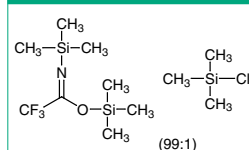
B0510 12mL

BSA (25% in Acetonitrile)
CAS RN: 10416-59-8

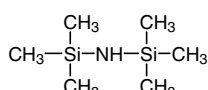
B0830 5mL 25mL 100mL

BSTFA
CAS RN: 25561-30-2

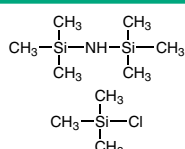
B3402 5mL 25mL 100mL

BSTFA-TMCS (99:1)
CAS RN: 25561-30-2

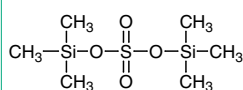
H0089 25mL 100mL 500mL

HMDS
CAS RN: 999-97-3

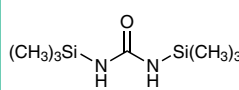
T0274 12mL

HMDS and TMCS
(in Anhydrous Pyridine)

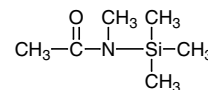
B1245 5g 25g

Bis(trimethylsilyl) Sulfate
CAS RN: 18306-29-1

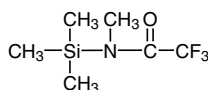
B1103 25g

BSU
CAS RN: 18297-63-7

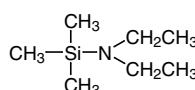
M0536 10g 25g

N-Methyl-
N-TMS-acetamide
CAS RN: 7449-74-3

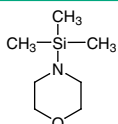
M0672 5mL 25mL

MSTFA
CAS RN: 24589-78-4

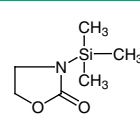
T0492 25mL

TMS-DEA
CAS RN: 996-50-9

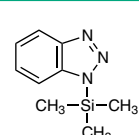
T1277 5mL 25mL

N-(Trimethylsilyl)-
morpholine
CAS RN: 13368-42-8

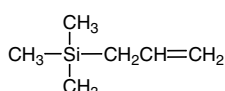
T1535 5g

3-Trimethylsilyl-
2-oxazolidinone
CAS RN: 43112-38-5

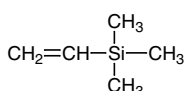
T1752 5g 25g

1-TMS-1H-benzotriazole
CAS RN: 43183-36-4

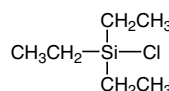
A0729 25mL 250mL

Allyltrimethylsilane
CAS RN: 762-72-1

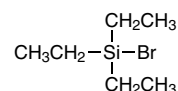
V0067 25mL 100mL

Vinyltrimethylsilane
CAS RN: 754-05-2トリエチル
シリル
(TES) 化剤

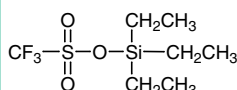
T0589 5g 25g 100g

Chlorotriethylsilane
CAS RN: 994-30-9

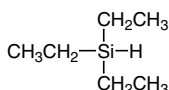
B5890 5g

Bromotriethylsilane
CAS RN: 1112-48-7

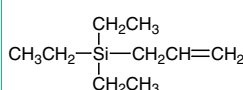
T1689 5g 25g

Triethylsilyl Triflate
CAS RN: 79271-56-0

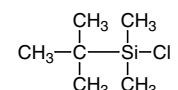
T0662 25mL 250mL

Triethylsilane
CAS RN: 617-86-7

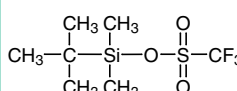
A2299 5g

Allyltriethylsilane
CAS RN: 17898-21-4tert-ブチル
ジメチル
シリル
(TBS) 化剤

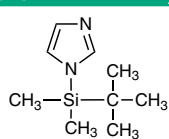
B0995 5g 25g 100g

TBSCl
CAS RN: 18162-48-6

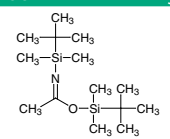
T1525 5g 25g

TBS Triflate
CAS RN: 69739-34-0

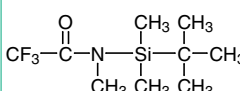
B1043 1g 5g

1-(tert-Butyldimethylsilyl)-
imidazole
CAS RN: 54925-64-3

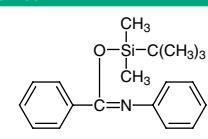
B1906 1g 5g

N,O-Bis(tert-butyl)dimethylsilyl-
acetamide
CAS RN: 82112-21-8

B1150 1g 10g

MTBSTFA
CAS RN: 77377-52-7

B2697 5g

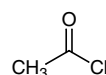
TBS-BEZA
CAS RN: 404392-70-7

<p>トリイソ プロピル シリル (TIPS) 化剤</p>	<p>T1078 5mL 25mL 250mL</p> $\begin{array}{c} \text{CH}(\text{CH}_3)_2 \\ \\ (\text{CH}_3)_2\text{CH}-\text{Si}-\text{Cl} \\ \\ \text{CH}(\text{CH}_3)_2 \end{array}$ <p>TIPSCI CAS RN: 13154-24-0</p>	<p>T1588 5g 25g</p> $\begin{array}{c} \text{O} \quad \text{CH}(\text{CH}_3)_2 \\ \quad \\ \text{CF}_3-\text{S}-\text{O}-\text{Si}-\text{CH}(\text{CH}_3)_2 \\ \quad \\ \text{O} \quad \text{CH}(\text{CH}_3)_2 \end{array}$ <p>Triisopropylsilyl Triflate CAS RN: 80522-42-5</p>	<p>T1533 5mL 25mL 100mL</p> $\begin{array}{c} \text{CH}(\text{CH}_3)_2 \\ \\ (\text{CH}_3)_2\text{CH}-\text{Si}-\text{H} \\ \\ \text{CH}(\text{CH}_3)_2 \end{array}$ <p>Triisopropylsilane CAS RN: 6485-79-6</p>	<p>tert-ブチル ジフェニル シリル (TBDPS) 化剤</p>
<p>B1223 5mL 25mL 100mL</p> $\begin{array}{c} \text{C}_6\text{H}_5 \\ \\ \text{H}_3\text{C}-\text{C}-\text{Si}-\text{Cl} \\ \quad \\ \text{H}_3\text{C} \quad \text{C}_6\text{H}_5 \end{array}$ <p>TBDPSCI CAS RN: 58479-61-1</p>	<p>B3566 5g</p> $\begin{array}{c} \text{C}_6\text{H}_5 \\ \\ \text{H}_3\text{C}-\text{C}-\text{Si}-\text{H} \\ \quad \\ \text{H}_3\text{C} \quad \text{C}_6\text{H}_5 \end{array}$ <p>tert-Butyldiphenylsilane CAS RN: 33729-92-9</p>	<p>B2898 1g 5g</p> $\begin{array}{c} \text{C}_6\text{H}_5 \\ \\ \text{H}_3\text{C}-\text{C}-\text{Si}-\text{O}-\text{S}(=\text{O})_2-\text{CF}_3 \\ \quad \\ \text{H}_3\text{C} \quad \text{C}_6\text{H}_5 \end{array}$ <p>tert-Butyldiphenylsilyl Triflate CAS RN: 92886-86-7</p>	<p>その他</p>	<p>D0135 5g 25g</p> $\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{Si}-\text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$ <p>Dimethylethylchlorosilane CAS RN: 6917-76-6</p>
<p>D1590 5mL 25mL</p> $\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{CH}_2-\text{Si}-\text{Cl} \\ \\ \text{CH}_3 \end{array}$ <p>Chlorodimethylpropylsilane CAS RN: 17477-29-1</p>	<p>D1594 5mL 25mL</p> $\begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \diagdown \quad / \\ \text{Si}-\text{Cl} \\ / \quad \diagdown \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$ <p>Dimethylisopropylchlorosilane CAS RN: 3634-56-8</p>	<p>B2010 25mL</p> $\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3(\text{CH}_2)_3-\text{Si}-\text{Cl} \\ \\ \text{CH}_3 \end{array}$ <p>Butylchlorodimethylsilane CAS RN: 1000-50-6</p>	<p>D1827 25mL 100mL</p> $\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3(\text{CH}_2)_7-\text{Si}-\text{Cl} \\ \\ \text{CH}_3 \end{array}$ <p>Dimethyl-n-octylchlorosilane CAS RN: 18162-84-0</p>	<p>T2116 5g</p> $\begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \quad \text{CH}_3 \\ \quad \quad \\ \text{CH}-\text{C}-\text{Si}-\text{Cl} \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$ <p>Chloro(dimethyl)- hexylsilane CAS RN: 67373-56-2</p>
<p>C1468 25mL</p> $\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3(\text{CH}_2)_9-\text{Si}-\text{Cl} \\ \\ \text{CH}_3 \end{array}$ <p>Chloro(decyl)- dimethylsilane CAS RN: 38051-57-9</p>	<p>C1469 25mL</p> $\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3(\text{CH}_2)_{11}-\text{Si}-\text{Cl} \\ \\ \text{CH}_3 \end{array}$ <p>Chloro(dodecyl)- dimethylsilane CAS RN: 66604-31-7</p>	<p>D1560 25mL</p> $\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3(\text{CH}_2)_{17}-\text{Si}-\text{Cl} \\ \\ \text{CH}_3 \end{array}$ <p>Dimethyloctadecylchlorosilane CAS RN: 18643-08-8</p>	<p>C1207 5mL 25mL</p> $\begin{array}{c} \text{CH}_3 \\ \\ \text{NC}-\text{CH}_2\text{CH}_2\text{CH}_2-\text{Si}-\text{Cl} \\ \\ \text{CH}_3 \end{array}$ <p>(3-Cyanopropyl)- dimethylchlorosilane CAS RN: 18156-15-5</p>	<p>B2334 5g</p> $\begin{array}{c} \text{C}_6\text{H}_5 \\ \\ \text{CH}_2-\text{Si}-\text{Cl} \\ \\ \text{CH}_3 \end{array}$ <p>Benzylchlorodimethylsilane CAS RN: 1833-31-4</p>
<p>D1147 5mL 25mL</p> $\begin{array}{c} \text{C}_6\text{H}_5 \\ \\ \text{Si}-\text{Cl} \\ \\ \text{CH}_3 \end{array}$ <p>Chlorodimethylphenylsilane CAS RN: 768-33-2</p>	<p>D2262 1g 5g</p> $\begin{array}{c} \text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3-\text{CH}-\text{Si}-\text{Cl} \\ \quad \\ \text{CH}_3 \quad \text{CH}_2\text{CH}_3 \end{array}$ <p>Chlorodiethylisopropylsilane CAS RN: 107149-56-4</p>	<p>T3524 5g 25g</p> $\begin{array}{c} (\text{CH}_2)_3\text{CH}_3 \\ \\ \text{CH}_3(\text{CH}_2)_3-\text{Si}-\text{Cl} \\ \\ (\text{CH}_2)_3\text{CH}_3 \end{array}$ <p>Tributylchlorosilane CAS RN: 995-45-9</p>	<p>D1390 25mL</p> $\begin{array}{c} \text{C}_6\text{H}_5 \\ \\ \text{C}_6\text{H}_5-\text{Si}-\text{Cl} \\ \\ \text{CH}_3 \end{array}$ <p>Diphenylmethylchlorosilane CAS RN: 144-79-6</p>	<p>T0939 5g 25g</p> $\begin{array}{c} \text{C}_6\text{H}_5 \\ \\ \text{C}_6\text{H}_5-\text{Si}-\text{Cl} \\ \\ \text{C}_6\text{H}_5 \end{array}$ <p>Triphenylchlorosilane CAS RN: 76-86-8</p>
<p>C1492 5mL 25mL</p> $\begin{array}{c} \text{CH}(\text{CH}_3)_2 \\ \\ \text{H}-\text{Si}-\text{Cl} \\ \\ \text{CH}(\text{CH}_3)_2 \end{array}$ <p>Chlorodiisopropylsilane CAS RN: 2227-29-4</p>	<p>T0398 5g 25g 500g</p> $\begin{array}{c} \text{Cl} \\ \\ \text{H}-\text{Si}-\text{Cl} \\ \\ \text{Cl} \end{array}$ <p>Trichlorosilane CAS RN: 10025-78-2</p>	<p>C2411 5g</p> $\begin{array}{c} \text{Si}(\text{CH}_3)_3 \\ \\ (\text{CH}_3)_3\text{Si}-\text{Si}-\text{Cl} \\ \\ \text{Si}(\text{CH}_3)_3 \end{array}$ <p>Chlorotris(trimethylsilyl)- silane CAS RN: 5565-32-2</p>	<p>D0358 25mL 100mL 500mL</p> $\begin{array}{c} \text{Cl} \\ \\ \text{CH}_3-\text{Si}-\text{CH}_3 \\ \\ \text{Cl} \end{array}$ <p>Dichlorodimethylsilane CAS RN: 75-78-5</p>	<p>D1976 5g 25g</p> $\begin{array}{c} \text{Cl} \\ \\ \text{CH}_3\text{CH}_2-\text{Si}-\text{CH}_2\text{CH}_3 \\ \\ \text{Cl} \end{array}$ <p>Dichlorodiethylsilane CAS RN: 1719-53-5</p>
<p>D2603 5g 25g</p> $\begin{array}{c} \text{CH}_3 \quad \text{Cl} \quad \text{CH}_3 \\ \quad \quad \\ \text{Si} \\ \quad \\ \text{CH}_3 \quad \text{Cl} \quad \text{CH}_3 \end{array}$ <p>Dichlorodiisopropylsilane CAS RN: 7751-38-4</p>	<p>D2469 5g</p> $\begin{array}{c} \text{H}_3\text{C} \quad \text{Cl} \quad \text{CH}_3 \\ \quad \quad \\ \text{H}_3\text{C}-\text{C}-\text{Si}-\text{C}-\text{CH}_3 \\ \quad \quad \\ \text{H}_3\text{C} \quad \text{Cl} \quad \text{CH}_3 \end{array}$ <p>Di-tert-butylchlorosilane CAS RN: 18395-90-9</p>	<p>D1995 5mL 25mL</p> $\begin{array}{c} \text{Cl} \\ \\ \text{CH}_3-\text{Si}-\text{Cl} \\ \\ \text{Cl} \end{array}$ <p>3-Chloropropyl- dichloromethylsilane CAS RN: 7787-93-1</p>	<p>D0362 25g 100g 500g</p> $\begin{array}{c} \text{Cl} \\ \\ \text{C}_6\text{H}_5-\text{Si}-\text{C}_6\text{H}_5 \\ \\ \text{Cl} \end{array}$ <p>Dichlorodiphenylsilane CAS RN: 80-10-4</p>	<p>D2334 5g 25g</p> $\begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \quad \\ \text{Cl}-\text{Si}-\text{O}-\text{Si}-\text{Cl} \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$ <p>1,3-Dichloro-1,1,3,3- tetramethyldisiloxane CAS RN: 2401-73-2</p>
<p>D1608 5g 25g</p> $\begin{array}{c} (\text{CH}_3)_2\text{HC} \quad \text{CH}(\text{CH}_3)_2 \\ \quad \\ \text{Cl}-\text{Si}-\text{O}-\text{Si}-\text{Cl} \\ \quad \\ (\text{CH}_3)_2\text{HC} \quad \text{CH}(\text{CH}_3)_2 \end{array}$ <p>1,3-Dichloro-1,1,3,3- tetraisopropylsiloxane CAS RN: 69304-37-6</p>	<p>B1688 5g 25g</p> $\begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \quad \\ \text{Cl}-\text{Si}-\text{CH}_2\text{CH}_2-\text{Si}-\text{Cl} \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$ <p>1,2-Bis(chlorodimethylsilyl)- ethane CAS RN: 13528-93-3</p>	<p>B1699 1mL 5mL</p> $\begin{array}{c} \text{SiH}(\text{CH}_3)_2 \\ \\ \text{C}_6\text{H}_4 \\ \\ \text{SiH}(\text{CH}_3)_2 \end{array}$ <p>1,2-Bis(dimethylsilyl)- benzene CAS RN: 17985-72-7</p>	<p>D3135 1g 5g</p> $\begin{array}{c} \text{O} \quad \text{C}(\text{CH}_3)_3 \quad \text{O} \\ \quad \quad \\ \text{CF}_3-\text{S}-\text{O}-\text{Si}-\text{O}-\text{S}-\text{CF}_3 \\ \quad \quad \\ \text{O} \quad \text{C}(\text{CH}_3)_3 \quad \text{O} \end{array}$ <p>Di-tert-butylsilyl Ditriflate CAS RN: 85272-31-7</p>	

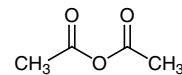
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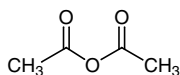
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Acetyl Chloride
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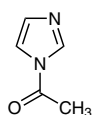
A2036 300mL

Acetic Anhydride
CAS RN: 108-24-7

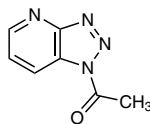
A1668 100mL 500mL

Acetic Anhydride
(ca. 1mol/L in Dichloromethane)
CAS RN: 108-24-7

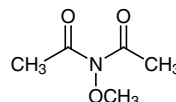
A0694 25g

N-Acetylimidazole
CAS RN: 2466-76-4

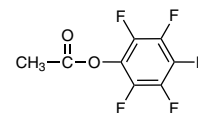
A1219 1g 5g

1-Acetyl-1H-1,2,3-triazolo[4,5-b]pyridine
CAS RN: 107866-54-6

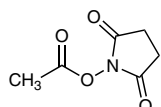
M1168 5g

N,N,N-Diacetylmethoxyamine
CAS RN: 128459-09-6

P2192 1g 5g

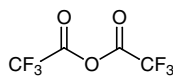
Pentafluorophenyl Acetate
CAS RN: 19220-93-0

S0878 5g 25g

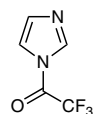
N-Succinimidyl Acetate
CAS RN: 14464-29-0

トリフルオロアセチル化剤

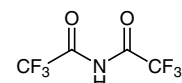
T0433 20mL 100mL 400mL

Trifluoroacetic Anhydride
CAS RN: 407-25-0

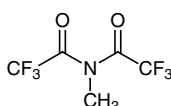
T0670 5g 25g

1-(Trifluoroacetyl)-imidazole
CAS RN: 1546-79-8

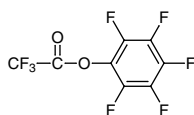
B0986 5g 25g

Bistrifluoroacetamide
CAS RN: 407-24-9

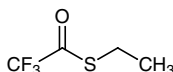
M0671 1mL 5mL

MBTFA
CAS RN: 685-27-8

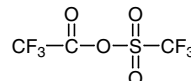
P1894 5g 25g

Pentafluorophenyl Trifluoroacetate
CAS RN: 14533-84-7

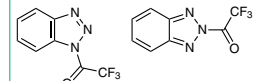
T0872 5mL

Trifluorothioacetic Acid S-Ethyl Ester
CAS RN: 383-64-2

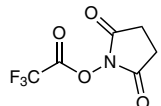
T1531 5g

Trifluoroacetyl Trifluoromethanesulfonate
CAS RN: 68602-57-3

T3174 1g 5g

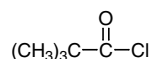
(Trifluoroacetyl)-benzotriazole
CAS RN: 183266-61-7

S0915 1g

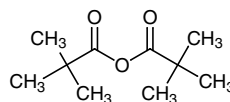
N-Succinimidyl Trifluoroacetate
CAS RN: 5672-89-9

ピバロイル化剤

P0677 25mL 500mL

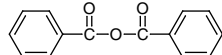
Pivaloyl Chloride
CAS RN: 3282-30-2

P1414 25mL 250mL

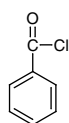
Pivalic Anhydride
CAS RN: 1538-75-6

ベンゾイル化剤

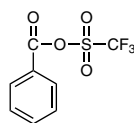
B0078 25g 100g 500g

Benzoic Anhydride
CAS RN: 93-97-0

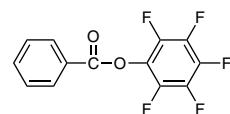
B0105 25mL 500mL

Benzoyl Chloride
CAS RN: 98-88-4

B3567 5g

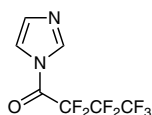
Benzoyl Triflate
CAS RN: 36967-85-8

P2229 1g 5g

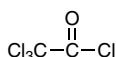
Pentafluorophenyl Benzoate
CAS RN: 1548-84-1

その他

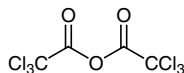
H0467 5g 25g

1-(Perfluorobutyl)-imidazole
CAS RN: 32477-35-3

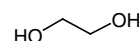
T0373 25g 100g 500g

Trichloroacetyl Chloride
CAS RN: 76-02-8

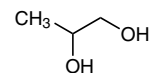
T0792 25g


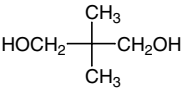

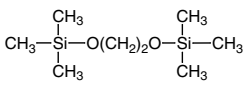
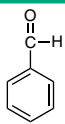
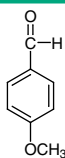
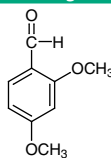
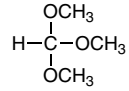
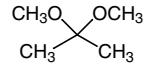
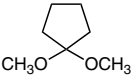
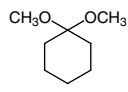
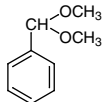
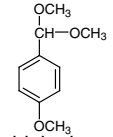
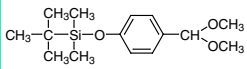
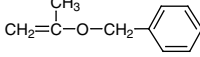
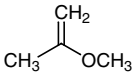
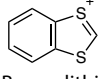
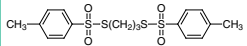
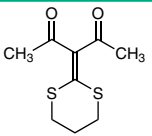
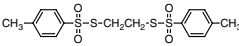
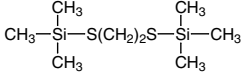
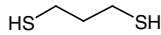
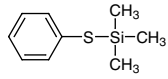
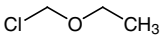
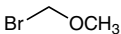
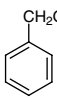
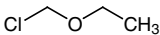
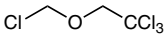
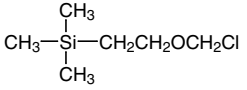
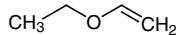
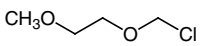
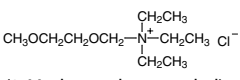

Trichloroacetic Anhydride
CAS RN: 4124-31-6アセタール化剤・
チオアセタール化剤アセタール化剤
(ジオール誘導体)

E0105 25g 500g

Ethylene Glycol
CAS RN: 107-21-1

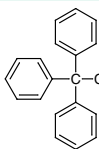
P0485 500g

1,2-Propanediol
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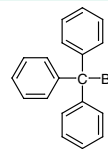
<p>P0486 25g 100g 500g</p>  <p>1,3-Propanediol CAS RN: 504-63-2</p>	<p>D0791 25g 500g</p>  <p>2,2-Dimethyl-1,3-propanediol CAS RN: 126-30-7</p>	<p>B3563 5g</p>  <p>1,3-Bis(trimethylsilyloxy)propane CAS RN: 17887-80-8</p>	<p>E0478 5g 25g</p>  <p>1,2-Bis(trimethylsilyloxy)ethane CAS RN: 7381-30-8</p>	<p>アセタール化剤 (カルボニル誘導体)</p>	
<p>B2379 500g</p>  <p>Benzaldehyde CAS RN: 100-52-7</p>	<p>A0480 25mL 500mL</p>  <p>p-Anisaldehyde CAS RN: 123-11-5</p>	<p>D0626 25g 100g 500g</p>  <p>2,4-Dimethoxybenzaldehyde CAS RN: 613-45-6</p>	<p>O0068 25mL 500mL</p>  <p>Trimethyl Orthoformate CAS RN: 149-73-5</p>		<p>A0057 25mL 500mL</p>  <p>2,2-Dimethoxypropane CAS RN: 77-76-9</p>
<p>D1886 1mL 5mL</p>  <p>1,1-Dimethoxycyclopentane CAS RN: 931-94-2</p>	<p>D1372 25mL</p>  <p>1,1-Dimethoxycyclohexane CAS RN: 933-40-4</p>	<p>B1197 25mL 100mL 500mL</p>  <p>Benzaldehyde Dimethyl Acetal CAS RN: 1125-88-8</p>	<p>A1247 25mL 500mL</p>  <p>p-Anisaldehyde Dimethyl Acetal CAS RN: 2186-92-7</p>	<p>B3577 5g</p>  <p>tert-Butyl[4-(dimethoxymethyl)phenoxy]dimethylsilane CAS RN: 118736-04-2</p>	
<p>B1257 1mL 5mL</p>  <p>2-Benzyloxy-1-propene CAS RN: 32783-20-3</p>	<p>I0303 25mL 100mL 500mL</p>  <p>2-Methoxypropene CAS RN: 116-11-0</p>	<p>チオアセタール化剤</p>		<p>B1151 5g</p>  <p>1,3-Benzodithiolium Tetrafluoroborate CAS RN: 57842-27-0</p>	<p>D2390 5g 25g</p>  <p>1,3-Di(p-tosylthio)propane CAS RN: 3866-79-3</p>
<p>D4208 1g 5g</p>  <p>3-(1,3-Dithian-2-ylidene)-2,4-pentanedione CAS RN: 55727-23-6</p>	<p>E0471 5g 25g</p>  <p>1,2-Di(p-tosylthio)ethane CAS RN: 2225-23-2</p>	<p>E0479 5g</p>  <p>1,2-Bis(trimethylsilylthio)ethane CAS RN: 51048-29-4</p>	<p>P0763 25mL 100mL</p>  <p>1,3-Propanedithiol CAS RN: 109-80-8</p>	<p>P1378 5g 25g</p>  <p>(Phenylthio)trimethylsilane CAS RN: 4551-15-9</p>	
<p>アルコキシメチル化剤</p>					
<p>C0201 25g 100g 500g</p>  <p>Chloromethyl Methyl Ether CAS RN: 107-30-2</p>	<p>B2131 5g 25g</p>  <p>Bromomethyl Methyl Ether CAS RN: 13057-17-5</p>	<p>B1207 25g 100g 500g</p>  <p>Benzyl Chloromethyl Ether CAS RN: 3587-60-8</p>			
<p>C201 25g 100g 500g</p>  <p>Chloromethyl Ethyl Ether CAS RN: 3188-13-4</p>	<p>C2412 5g</p>  <p>Chloromethyl 2,2,2-Trichloroethyl Ether CAS RN: 69573-75-7</p>	<p>C1339 5mL 25mL</p>  <p>SEM-Chloride CAS RN: 76513-69-4</p>	<p>E0193 25mL 100mL 500mL</p>  <p>Ethyl Vinyl Ether CAS RN: 109-92-2</p>	<p>M0680 25mL 500mL</p>  <p>MEM-Chloride CAS RN: 3970-21-6</p>	
<p>M0681 5g</p>  <p>(2-Methoxyethoxymethyl)-triethylammonium Chloride CAS RN: 60043-43-8</p>	<p>D0555 25mL 100mL 500mL</p>  <p>3,4-Dihydro-2H-pyran CAS RN: 110-87-2</p>				

トリチル (Tr) 化剤

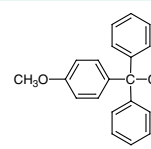
C0308 25g 100g 500g

Trityl Chloride
CAS RN: 76-83-5

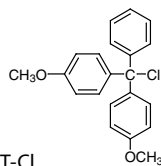
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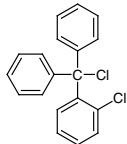
M0790 25g 250g

4-Methoxytrityl Chloride
CAS RN: 14470-28-1

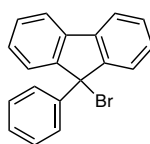
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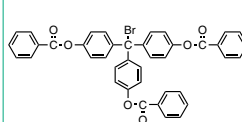
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2-Chlorotrityl Chloride
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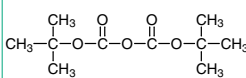
B1702 5g 25g

9-Bromo-9-phenylfluorene
CAS RN: 55135-66-5

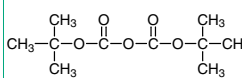
T1071 5g 25g

Tris[4-(phenylcarbonyloxy)-phenyl]methyl Bromide
CAS RN: 86610-66-4tert-ブトキシ
カルボニル (Boc) 化剤

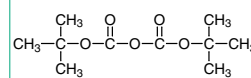
D1547 25g 100g 500g

Boc₂O
CAS RN: 24424-99-5

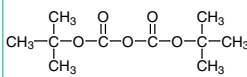
D3878 100g 500g

Boc₂O (ca. 30% in Dioxane)
CAS RN: 24424-99-5

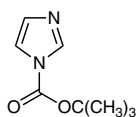
D3879 100mL 500mL

Boc₂O
(ca. 30% in Tetrahydrofuran)
CAS RN: 24424-99-5

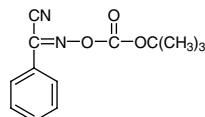
D3880 100g 400g

Boc₂O (ca. 30% in Toluene)
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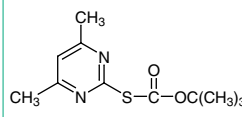
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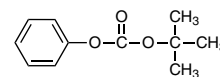
B0988 5g 25g

Boc-ON
CAS RN: 58632-95-4

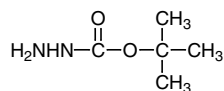
B1089 5g 25g

2-Boc-thio-4,6-dimethylpyrimidine
CAS RN: 41840-28-2

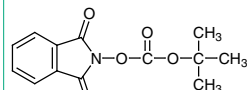
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tert-Butyl Phenyl Carbonate
CAS RN: 6627-89-0

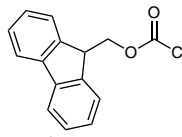
C0933 25g 250g

Boc-hydrazine
CAS RN: 870-46-2

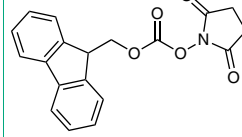
C1573 1g 5g

N-(tert-Butoxycarbonyloxy)-phthalimide
CAS RN: 15263-20-49-フルオレニル
メチルオキシ
カルボニル (Fmoc) 化剤

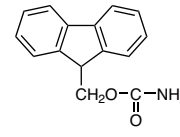
F0197 5g 25g 100g

Fmoc-Cl
CAS RN: 28920-43-6

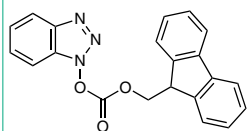
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Fmoc-OSu
CAS RN: 82911-69-1

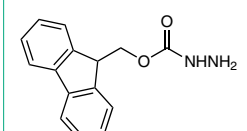
F0689 1g 5g

Fmoc-NH₂
CAS RN: 84418-43-9

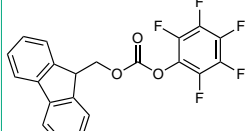
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Fmoc-OBt
CAS RN: 82911-71-5

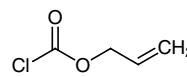
F0872 5g 25g

Fmoc-hydrazine
CAS RN: 35661-51-9

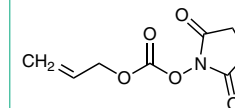
F0936 1g 5g

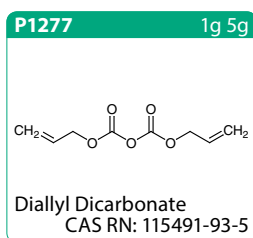
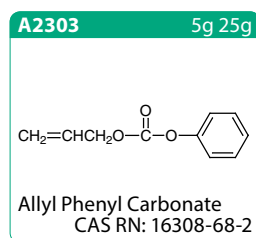
Fmoc-OPfp
CAS RN: 88744-04-1Alloc 化剤・Cbz 化剤・
Bn 化剤・アリル化剤アリルオキシ
カルボニル
(Alloc) 化剤

A1268 25g 500g

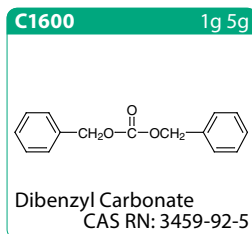
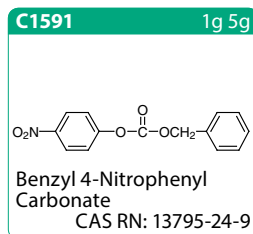
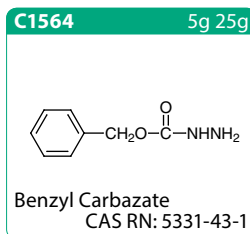
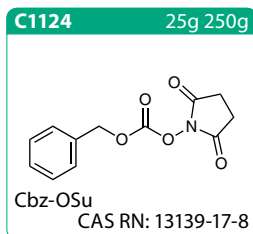
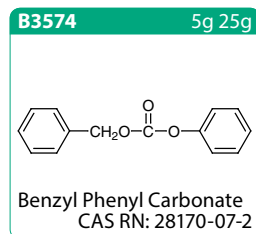
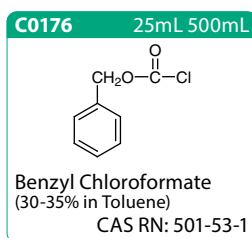
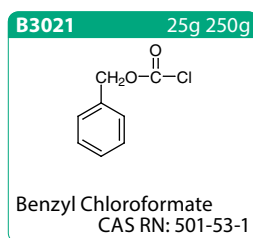
Allyl Chloroformate
CAS RN: 2937-50-0

A2302 5g 25g

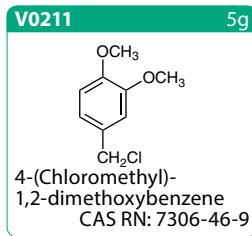
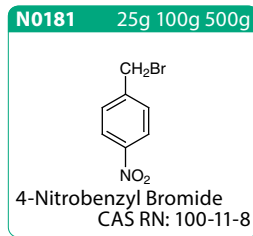
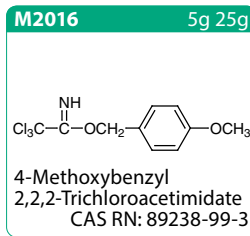
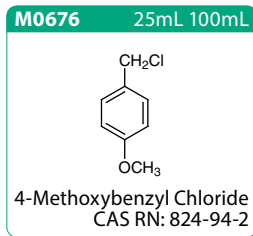
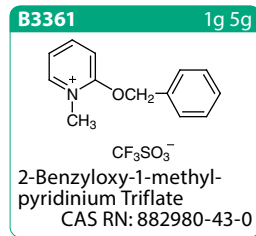
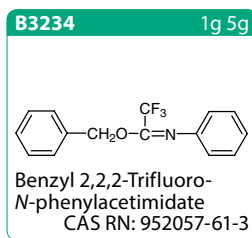
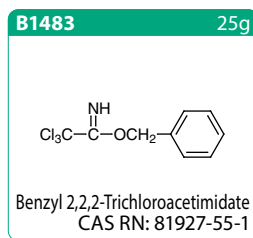
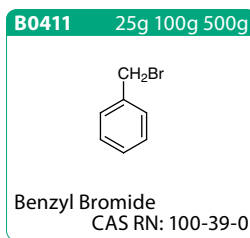
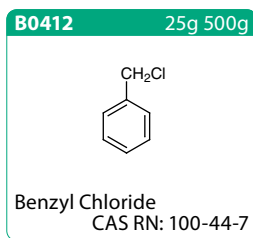
Allyl N-Succinimidyl Carbonate
CAS RN: 135544-68-2



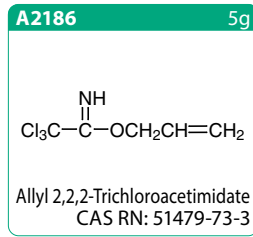
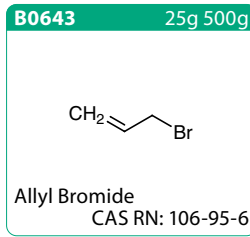
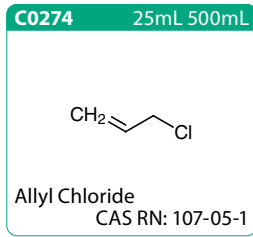
ベンジル
オキシ
カルボニル
(Cbz) 化剤



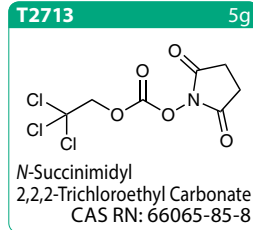
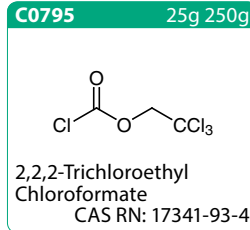
ベンジル
(Bn) 化剤



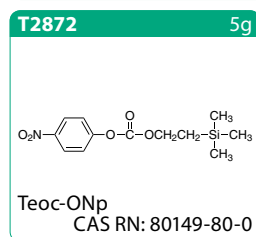
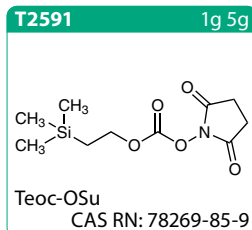
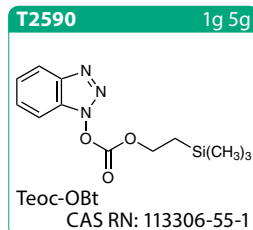
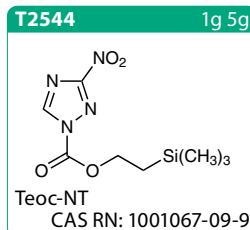
アリル化剤



2,2,2-トリクロロ
エトキシ
カルボニル (Troc) 化剤

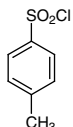


2-(トリメチルシリル)
エトキシ
カルボニル (Teoc) 化剤



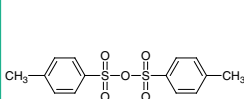
スルホニル化剤

T0272 25g 500g



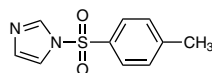
p-Toluenesulfonyl Chloride
CAS RN: 98-59-9

T1485 5g 25g



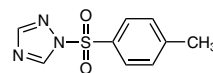
p-Toluenesulfonic Anhydride
CAS RN: 4124-41-8

T1985 5g 25g



1-(*p*-Toluenesulfonyl)-imidazole
CAS RN: 2232-08-8

T3187 1g



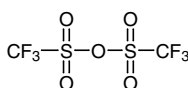
1-(*p*-Toluenesulfonyl)-1,2,4-triazole
CAS RN: 13578-51-3

T1027 5g 25g



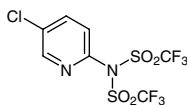
Trifluoromethanesulfonyl Chloride
CAS RN: 421-83-0

T1100 10g 25g 250g



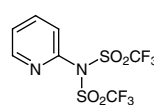
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CAS RN: 358-23-6

B1865 5g 25g



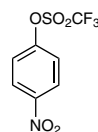
Comins Triflating Reagent
CAS RN: 145100-51-2

B1871 5g



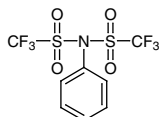
2-Pyridyltriflimide
CAS RN: 145100-50-1

N0993 1g 5g



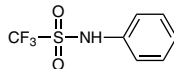
4-Nitrophenyl Triflate
CAS RN: 17763-80-3

P1257 5g 25g



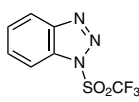
Phenyl Triflimide
CAS RN: 37595-74-7

T2985 1g 5g



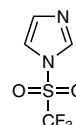
Trifluoromethanesulfonamide
CAS RN: 456-64-4

T3167 1g 5g



1-(Trifluoromethanesulfonyl)-1H-benzotriazole
CAS RN: 117632-84-5

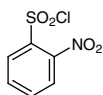
T3177 1g 5g



1-(Trifluoromethanesulfonyl)-imidazole
CAS RN: 29540-81-6

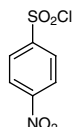
ノシル (Ns) 化剤

N0142 25g 100g 500g



2-Nitrobenzenesulfonyl Chloride
CAS RN: 1694-92-4

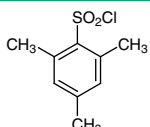
N0144 5g 25g 100g



4-Nitrobenzenesulfonyl Chloride
CAS RN: 98-74-8

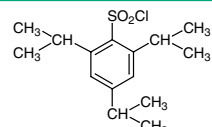
その他

M0071 25g 100g



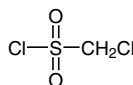
2-Mesitylenesulfonyl Chloride
CAS RN: 773-64-8

T0459 25g 500g



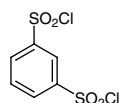
2,4,6-Triisopropylbenzenesulfonyl Chloride
CAS RN: 6553-96-4

C0924 5g 25g



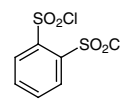
Chloromethylsulfonyl Chloride
CAS RN: 3518-65-8

B0848 5g 25g



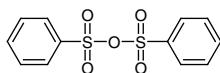
1,3-Benzenedisulfonyl Chloride
CAS RN: 585-47-7

B1128 1g 5g 25g



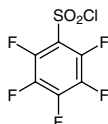
1,2-Benzenedisulfonyl Dichloride
CAS RN: 6461-76-3

B1931 5g 25g



Benzenesulfonic Anhydride
CAS RN: 512-35-6

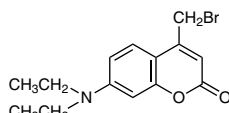
P0934 5g 25g



Pentafluorobenzenesulfonyl Chloride
CAS RN: 832-53-1

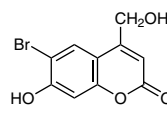
光分解性保護試薬

B5008 200mg



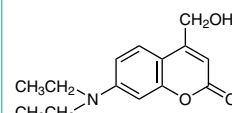
4-(Bromomethyl)-7-(diethylamino)coumarin
CAS RN: 1256259-14-9

B5738 250mg 1g

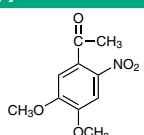
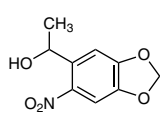
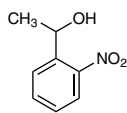
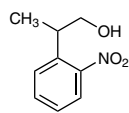
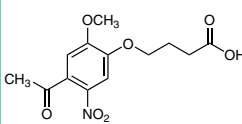
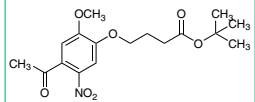
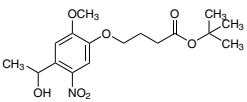
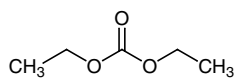
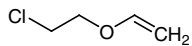
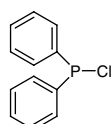
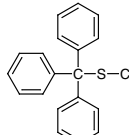
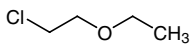
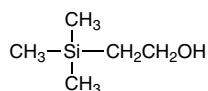
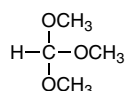


6-Bromo-7-hydroxy-4-(hydroxymethyl)coumarin
CAS RN: 223420-41-5

D4970 200mg



7-(Diethylamino)-4-(hydroxymethyl)coumarin
CAS RN: 54711-38-5

<p>D5477 1g 5g</p>  <p>4',5'-Dimethoxy-2'-nitroacetophenone CAS RN: 4101-32-0</p>	<p>N1069 1g 5g</p>  <p>α-Methyl-6-nitropiperonyl Alcohol CAS RN: 159873-64-0</p>	<p>N1132 1g 5g</p>  <p>1-(2-Nitrophenyl)ethanol CAS RN: 3205-25-2</p>	<p>N1133 1g 5g</p>  <p>2-(2-Nitrophenyl)propan-1-ol CAS RN: 64987-77-5</p>	<p>A3678 1g</p>  <p>4-(4-Acetyl-2-methoxy-5-nitrophenoxy)butanoic Acid CAS RN: 188891-18-1</p>
<p>B6669 1g</p>  <p>tert-Butyl 4-(4-Acetyl-2-methoxy-5-nitrophenoxy)butanoate CAS RN: 1410809-15-2</p>	<p>B6668 1g</p>  <p>tert-Butyl 4-[4-(1-Hydroxyethyl)-2-methoxy-5-nitrophenoxy]butanoate CAS RN: 1410809-16-3</p>	<p>その他の保護試薬</p>		
<p>C0041 25g 500g</p>  <p>Diethyl Carbonate CAS RN: 105-58-8</p>	<p>C0174 25mL</p>  <p>2-Chloroethyl Vinyl Ether (stabilized with MEHQ + Triethanolamine) CAS RN: 110-75-8</p>	<p>C0597 25g 100g 500g</p>  <p>Chlorodiphenylphosphine CAS RN: 1079-66-9</p>	<p>T1237 10g</p>  <p>Tritylsulfenyl Chloride CAS RN: 4165-03-5</p>	<p>C0608 25g 100g</p> <p style="text-align: center;">ClCH₂SCH₃</p> <p>Chloromethyl Methyl Sulfide CAS RN: 2373-51-5</p>
<p>C1172 25mL 500mL</p>  <p>2-Chloroethyl Ethyl Ether CAS RN: 628-34-2</p>	<p>T1441 5mL 25mL</p>  <p>2-(Trimethylsilyl)ethanol CAS RN: 2916-68-9</p>	<p>O0068 25mL 500mL</p>  <p>Trimethyl Orthoformate CAS RN: 149-73-5</p>		

東京化成工業株式会社

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