LIFE SCIENCE

Immunosuppressants and **Immunostimulants for Research** and Experimental Use

Immunosuppressant Ingredients

Immunosuppressant ingredients are chemical and medicinal agents used for the suppression and regulation of immune responses. Pharmacologically speaking, these agents have varied mechanisms of action, such as regulation of inflammatory gene expression, suppression of lymphocyte signal transduction, neutralization of cytokine activity, and inhibition lymphocyte proliferation by agent-induced cytotoxicity. Common agents include glucocorticoids, alkylating agents, metabolic antagonists, calcineurin inhibitors, T-cell suppressive agents, and cytokine inhibitors.

5-Aminosalicylic Acid 5-Aminosalicylic acid (5-ASA) is commonly used as a gastrointestinal anti-inflammatory agent. It has i decrease leukotriene production, scavenge for free radicals, and inhibits leukocyte chemotaxis, etc.	25g / 500g [A0317] In vitro and in vivo pharmacologic effects that
Azathioprine Azathioprine is a produce of 6-mercantopurine (6-MP), which inhibits the synthesis of purine ribopurleo	5g / 25g [A2069]
Cyclophosphamide Monohydrate Cyclophosphamide is an antitumor alkylating reagent involved in the cross-linking of tumor cell DNA.	5g / 25g [C2236]
Cyclosporin A Cyclosporin A is a cyclic polypeptide immunosuppressant. It inhibits the activity of T-lymphocytes, and t	100mg / 1g [C2408] the phosphatase activity of calcineurin.
Dimethyl Fumarate Dimethyl fumarate has neuroprotective and immunomodulating effects.	25g / 500g [F0069]
Fingolimod Hydrochloride Fingolimod (FTY720) is an immunomodulatory agent. It is an agonist at sphingosine 1-phosphate (S1R tion from lymphoid organs.	200mg / 1g [F1018] P) receptors, and inhibits lymphocyte emigra-
Iguratimod	25mg / 250mg [10945]
Iguratimod (T-614) is an agent with anti-inflammatory and immunomodulatory activities. Its activity fun- globulin and inflammatory cytokines such as TNF-α, IL-1β and IL-6, and used as a disease modifying a	ctions by the inhibiting production of immune anti-rheumatic drug (DMARD).
Leflunomide Leflunomide is an immunomodulatory agent bearing two mechanisms of action: inhibition of pyrimidine tyrosine phosphorylation. As a result, it reduces the proliferation of T and B immune cells that are metabolite is teriflunomide [T3287].	200mg / 1g [L0250] e nucleotide synthesis and interference with active in MS (multiple sclerosis). Its active
Lobenzarit Disodium Salt Lobenzarit is an immunomodulatory agent and used as a disease modifying anti-rheumatic drug (DMA to be through a subset of T cells.	25mg / 100mg [L0278] ARD). Its principle mechanism action seems
6-Mercaptopurine Monohydrate 6-Mercaptopurine (6-MP) is a prodrug which is converted <i>in vivo</i> to 6-thioinosine monophosphate (TIM DNA/RNA synthesis.	1g / 5g [M0063] IP) which inhibits purine ribonucleotides and
Methotrexate Hydrate Methotrexate (MTX), an analog of folic acid, is a dihydrofolate reductase (DHFR) inhibitor and a folic a proliferation in S phases and tumor cell growth.	1g / 5g [M1664] cid antagonist. It inhibits DNA synthesis, cell
6-α-Methylprednisolone 6α-Methylprednisolone is a glucocorticosteroid with potent anti-inflammatory activities and reduced effe	1g / 5g [M1665] ects on electrolyte balance.
Mycophenolic Acid Mycophenolic acid (MPA) is an active metabolite of mycophenolate mofetil (MMF), and a selective inhin nase (IMPDH) for the synthesis of guanosine nucleotides in T and B lymphocytes.	1g [M2216] ibitor of inosine monophosphate dehydroge-
Mycophenolate Mofetil Mycophenolate mofetil (MMF) is a prodrug of the active immunosuppressant mycophenolic acid (MPA)	100mg / 1g [M2387]
Mizoribine Mizoribine is an imidazole nucleoside with immunosuppressive and antivirus activities.	50mg / 250mg [<mark>M2399]</mark>
D-Penicillamine D-Penicillamine is a hydrolytic degradation product of penicillin-type antibiotics. The pharmacologic efficillamine-cysteine disulfide bond and metal chelation. Additionally, it selectively supresses T-cell activity	5g / 25g [P0147] fects are associated with formation of a peni- y. B-cells are uneffected.
Prednisolone Prednisolone is an adrenocortical steroid agent with predominantly glucocorticoid properties, and the a	1g / 5g / 25g [P0637] ctive hepatic metabolite of prednisone.
Prednisolone Acetate	5g [P1283]

Prednisolone Acetate Prednisolone acetate is an adrenocortical steroid agent, and the acetate of prednisone [P0637]

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Prednisolone 21-Phosphate Disodium Salt

Prednisolone 21-phosphate is an adrenocortical steroid agent, and the phosphate of prednisolone [P0637]

Rapamycin

Rapamycin is an inhibitor of the mammalian target of rapamycin (mTOR), and inhibits activation of T cells and B cells by reducing the production of interleukin-2 (IL-2).

Sulfasalazine

25g [S0580] Sulfasalazine is split by intestinal bacteria to two main matabolites, sulfapyridine and 5-aminosalicylic acid (5-ASA), with 5-ASA showing anti-inflammatory effects. It is also a known potent inhibitor of NF-kB. Recent studies have reported that it works as a glutamate-cysteine transporter (xCT) inhibitor, and suppresses CD44v-dependent tumor growth.

Tacrolimus Monohydrate

10mg / 50mg [M2258] Tacrolimus (FK506) is a macrolide immunosuppressant positioning of the inhibitory activities of T-lymphocyte signal transduction and calcineurin.

6-Thioguanine

6-Thioguanine is converted to the active nucleotide metabolite in cells, subsequently leading to inhibition of DNA/RNA synthesis.

(±)-Thalidomide

1g / 5g [T2524] Thalidomide is a teratogenic non-barbiturate. Despite its troubled history, in the 2000's it was later discovered to have anti-inflammatory, anti-angiogenic and tumor necrosis factor- α (TNF- α) inhibitory activity.

Triptolide

10mg [T2899] Triptolide is a diterpene triepoxide with potent immunemodulation, anti-inflammatory, and anti-tumor properties by inhibiting NFkB activation.

Teriflunomide

Teriflunomide is the active metabolite of leflunomide [L0250] which inhibits pyrimidine nucleotide synthesis and interferes with tyrosine phosphorylation. It reduces the proliferation of T and B immune cells.

Immunostimulant Ingredients

Immunostimulant or immunopotentiating ingredients are agents that stimulate the immune system by inducing activation or increasing activity of any of its components. Some of them called immune adjuvants, depending on the type of the agent. Immunotherapy can trigger the immune system to fight illness, including cancer. Immunotherapy remains a very active area of cancer research.

Imiguimod

Imiquimod is a Toll-like receptor 7 (TLR7) agonist and a potent immune activator.

Inosine Pranobex

Inosine pranobex is a synthetic compound formed from the 4-acetamidobenzoate salt of 1-dimethylamino-2-propanol and inosine in a 3:1 molar ratio. It supports the immune system through modulation of T-cell proliferation and T-cell function, with additional antiviral activity.

Linomide

Linomide increases natural killer (NK) cell activity and macrophage cytotoxicity. Additionally, it inhibits angiogenesis and reduces the secretion of tumor necrosis factor-α (TNF-α).

Pidotimod

Pidotimod is a synthetic dipeptide with immunomodulating effects.

Resiauimod

Resiguimod is a tricyclic imidazoquinolone and an imiquimod analog. It acts as an immunomodulator and an anti-viral agent through activation immune cells via the Toll-like receptor 7 and 7/8 (TLR7 and 7/8) dependent signaling pathway. This signalling subsequently induces mRNA encoding cytokines including interferon- α (INF- α) at the treatment site.

For Laboratory Use, Research Purposes Only.

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100mg / 1g [10747]

100mg / 1g [T3287]

5q [D3918]

25mg [R0097]

1g / 5g [**T0212**]

100mg / 1g [11037]

10mg [L0270]

5q / 25q [P2147]

25mg / 100mg [R0197]

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