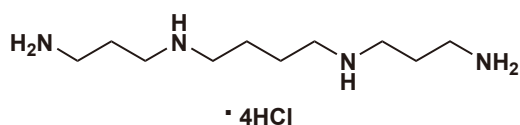


Protein Stabilizers

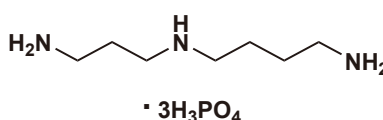
Proteins are polymers of amino acids which exhibit various functions in living organisms; their industrial and pharmacological applications continue to be active fields of research. Proteins are generally unstable in solution, being easily denatured by heating, etc.; improving their stability is often of utmost importance. We offer compounds that are ideal for preventing aggregation of target proteins.

Polyamines

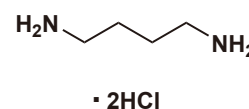
Polyamines are aliphatic compounds containing two or more amino groups per molecule. They are found ubiquitously throughout the domains of life, in cells ranging from microorganisms up to higher animals and plants. Polyamines can effectively stabilize biomolecules; they have been reported to inhibit the heat-induced aggregation of lysozyme.¹⁾



Spermine Tetrahydrochloride
[for Protein Research]
1g [P2950]



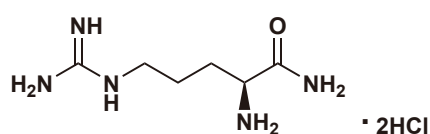
Spermidine Phosphate
[for Protein Research]
1g / 5g [P2957]



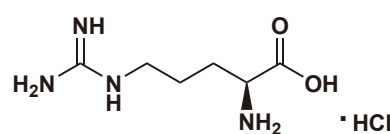
Putrescine Dihydrochloride
[for Protein Research]
5g / 25g [P3082]

Amino Acids and Derivatives

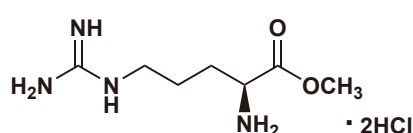
Amino acids with charged side chains and their esters, as well as certain amides, are useful compounds for inhibiting protein aggregation.²⁾ Arginine is also widely used as an additive for protein refolding.



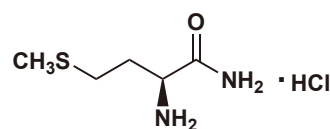
L-Argininamide Dihydrochloride
[for Protein Research]
500mg [A3459]



L-Arginine Hydrochloride
[for Protein Research]
5g [A3530]



L-Arginine Methyl Ester Dihydrochloride
[for Protein Research]
5g [A3531]



L-Methioninamide Hydrochloride
[for Protein Research]
500mg [M3519]

References

- 1) M. Kudou *et al.*, *Eur. J. Biochem.* **2003**, 270, 4547. <https://doi.org/10.1046/j.1432-1033.2003.03850.x>
- 2) K. Shiraki *et al.*, *J. Biochem.* **2002**, 132, 591. <https://doi.org/10.1093/oxfordjournals.jbchem.a003261>

Evaluation of Protein Stabilizers Using Lysozyme as a Model

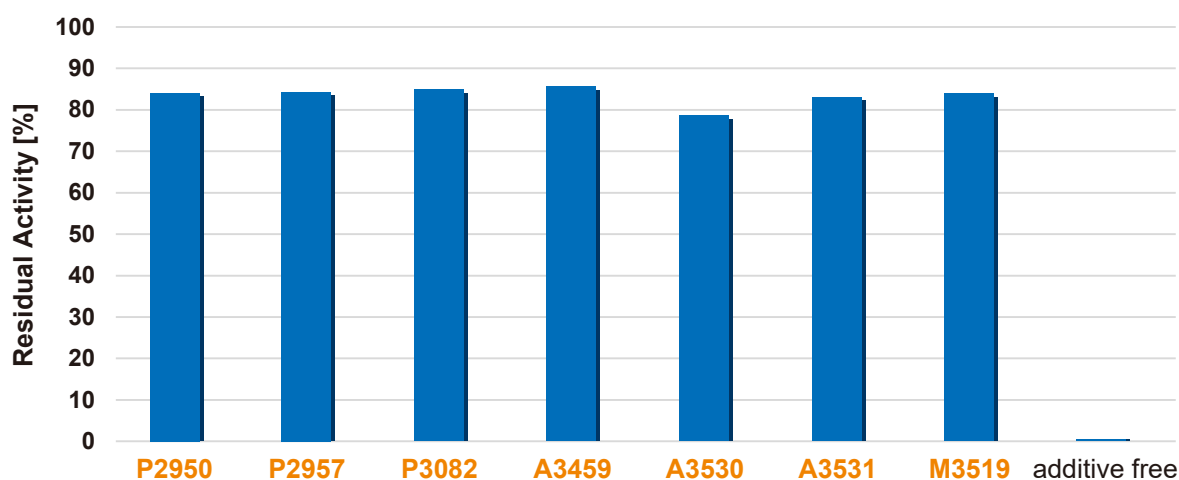


Figure. Residual activity of lysozyme after heating at 98°C (in-house analysis)
Addition of each stabilizer at a concentration of 100 mM allowed for retention of high activity.

For further information please refer to our website at www.TCIchemicals.com. ▶▶▶

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