O-Phospho-D-Serine

WARNING: This product is for laboratory research only: Not for administration to humans. Not for human or veterinary diagnostic or therapeutic use.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

Buyer’s exclusive remedy and Cayman’s sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman’s option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

Product Information

O-Phospho-D-Serine

Item No. 17602

CAS Registry No.: 73913-63-0

Formal Name: O-phosphono-D-serine

Synonyms: D-O-Phosphoserine, D-Serine-O-Phosphate, D-SOP

MF: C₆H₉NO₆P

FW: 185.1

Purity: ≥95%

Stability: ≥2 years at -20°C

Supplied as: A crystalline solid

Laboratory Procedures

For long term storage, we suggest that O-phospho-D-serine be stored as supplied at -20°C. It should be stable for at least two years.

O-Phospho-D-serine is supplied as a crystalline solid. O-Phospho-D-serine is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that organic solvent-free aqueous solutions of O-phospho-D-serine be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of O-phospho-D-serine in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

O-Phospho-D-serine is a phosphorylated form of D-serine, a natural amino acid made from L-serine by serine racemase in the mammalian central nervous system.¹ It can be dephosphorylated by phosphoserine phosphatase, like its isomer O-phospho-L-serine (L-SOP; Item No. 16151).² Unlike L-SOP, O-phospho-D-serine is a weak agonist of the metabotropic glutamate receptor mGluR4 (IC₅₀ = 1,260 µM vs. 4 µM for L-SOP) and poorly blocks phosphatidylserine receptor-mediated phagocytosis.³,⁴

References

3. Thomsen, C. and Suzdak, P.D. Serine-O-phosphate has affinity for type IV, but not type I, metabotropic glutamate receptor. NeuroReport 4, 1099-1101 (1993).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/17602