(S)-3,5-DHPG
Item No. 14411

CAS Registry No.: 162870-29-3
Formal Name: (αS)-amino-3,5-dihydroxy-benzeneacetic acid
Synonym(s): (S)-3,5-Dihydroxyphenylglycine
MF: C8H9NO4
FW: 183.2
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
Special Conditions: Air and light sensitive

Laboratory Procedures

For long term storage, we suggest that (S)-3,5-DHPG be stored as supplied at -20°C. It should be stable for at least two years.

(S)-3,5-DHPG is supplied as a crystalline solid. (S)-3,5-DHPG is soluble in organic solvents such as DMSO, which should be purged with an inert gas. The solubility of (S)-3,5-DHPG in this solvent is approximately 20 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of (S)-3,5-DHPG can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (S)-3,5-DHPG in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(S)-3,5-DHPG, known more commonly as DHPG, is an agonist of the group I metabotropic glutamate receptors (mGluRs), binding both mGluR1a and mGluR5a (Kᵢ = 0.9 and 3.9 µM, respectively) but not ionotropic glutamate receptors. The (S)-enantiomer is about ten times more potent than the (R)-enantiomer. (S)-3,5-DHPG is commonly used to evaluate the roles of group I mGluRs in neuronal signaling.

References