GYY 4137
Item No. 13345

CAS Registry No.: 106740-09-4
Formal Name: \((p\text{-methoxyphenyl})\text{morpholino-}
\text{phosphinodithioic acid}
MF: \(C_{11}H_{16}NO_2PS_2\cdot C_4H_{10}NO\)
FW: 377.5
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

Laboratory Procedures

For long term storage, we suggest that GYY 4137 be stored as supplied at -20°C. It should be stable for at least two years. GYY 4137 is supplied as a crystalline solid. A stock solution may be made by dissolving the GYY 4137 in an organic solvent purged with an inert gas. GYY 4137 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of GYY 4137 in these solvents is approximately 15 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 GYY 4137 can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of GYY 4137 in PBS, pH 7.2, is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Hydrogen sulfide (H2S) is a gaseous mediator which, like nitric oxide (NO), has numerous profound actions in mammalian physiology. GYY 4137 is a water-soluble, slow-releasing H2S donor.1 When given intravenously, it demonstrates vasodilator and anti-hypertensive activity in rats, in either the acute (L-NAME-induced) or chronic (spontaneously hypertensive) hypertension models.1 Intravenous GYY 4137 also protects against endotoxic shock in rats, inhibiting tumor necrosis factor-\(\alpha\), interleukin (IL)-\(\beta\), and IL-6 production and reducing NF-κB activation, iNOS and cyclooxygenase-2 expression, and NO and prostaglandin E2 generation.2

References

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