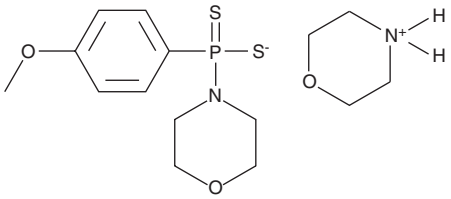
PRODUCT INFORMATION

GYY 4137

Item No. 13345

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



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

GYY 4137 is supplied as a crystalline solid. A stock solution may be made by dissolving the GYY 4137 in the solvent of choice, which should be 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 and 20 mg/ml, respectively.

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 solid 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.

Description

Hydrogen sulfide (H_2S) is a gaseous mediator which, like nitric oxide (NO), has numerous profound actions in mammalian physiology. GYY 4137 is a water-soluble, slow-releasing hydrogen sulfide (H_2S) 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-α, interleukin (IL)-1β, and IL-6 production and reducing NF-κB activation, iNOS and cyclooxygenase-2 expression, and NO and prostaglandin E_2 generation.[2]

References

1. Li, L., Whiteman, M., Guan, Y.Y., *et al.* Characterization of a novel, water-soluble hydrogen sulfide releasing molecule (GYY4137): New insights into the biology of hydrogen sulfide. *Circulation* **117(18)**, 2351-2360 (2008).
2. Li, L., Salto-Tellez, M., Tan, C.H., *et al.* GYY4137, a novel hydrogen sulfide-releasing molecule, protects against endotoxic shock in the rat. *Free Radic. Biol. Med.* **47(1)**, 103-113 (2009).

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