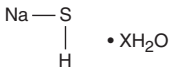
PRODUCT INFORMATION

Sodium Hydrogen Sulfide (hydrate)

Item No. 10012555

CAS Registry No.: 207683-19-0
Formal Name: sodium sulfide, hydrate
Synonyms: NaHS, NSC 158264, Sodium Hydrosulfide
MF: $HNaS \bullet XH_2O$
FW: 56.1
Purity: ≥65%
UV/Vis.: λ_{max}: 224 nm
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

Sodium hydrogen sulfide (hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the sodium hydrogen sulfide (hydrate) in the solvent of choice, which should be purged with an inert gas. Sodium hydrogen sulfide (hydrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of sodium hydrogen sulfide (hydrate) in these solvents is approximately 3 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 sodium hydrogen sulfide (hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of sodium hydrogen sulfide (hydrate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Hydrogen sulfide (H_2S) is, like nitric oxide, an important gaseous mediator that has significant effects on the immunological, neurological, cardiovascular and pulmonary systems of mammals. Sodium hydrogen sulfide is an H_2S donor commonly used in cellular and whole animal experimental systems. For example, it has been used to suggest that H_2S promotes neutrophil migration, reduces airway inflammation, and protects neurites, heart, and intestine from chemical or ischemic-reperfusion damage.[1-5]

References

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2. Chen, Y.H., Wu, R., Geng, B., *et al.* Endogenous hydrogen sulfide reduces airway inflammation and remodeling in a rat model of asthma. *Cytokine* **45(2)**, 117-123 (2009).
3. Hu, L.F., Lu, M., Wu, Z.Y., *et al.* Hydrogen sulfide inhibits rotenone-induced apoptosis via preservation of mitochondrial function. *Mol. Pharmacol.* **75(1)**, 27-34 (2009).
4. Yong, Q.C., Lee, S.W., Foo, C.S., *et al.* Endogenous hydrogen sulphide mediates the cardioprotection induced by ischemic postconditioning. *Am. J. Physiol. Heart Circ. Physiol.* **295(3)**, H1330-H1340 (2008).
5. Liu, H., Bai, X.B., Shi, S., *et al.* Hydrogen sulfide protects from intestinal ischaemia-reperfusion injury in rats. *J. Pharm. Pharmacol.* **61(2)**, 207-212 (2009).

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