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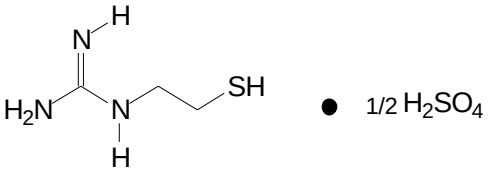
ProductInformation

Mercaptoethylguanidine, hemisulfate salt

Product Number **M 9940**
Storage Temperature 2-8 °C

CAS# 3979-00-8
Synonym: MEG sulfate



Product Description

Formula: $C_3H_9N_3S \bullet ½ (H_2SO_4)$
Formula Weight: 168.2
Purity: minimum 98% (TLC)

Mercaptoethylguanidine (MEG) is an inhibitor of the inducible isoform of nitric oxide synthase (iNOS) and a scavenger of peroxynitrite. Peroxynitrite and its reactive precursor, nitric oxide (NO), have been implicated as having a role in the inflammatory response to injury, the pathogenesis of various forms of shock, the initiation of cell damage leading to apoptosis in kidney sickle cells, and the dephosphorylation of critical components of the mitogen-activated protein (MAP) kinase pathways. Due to its inhibition and scavenging characteristics, MEG has been shown to exert beneficial effects when administered to combat *in vivo* inflammatory response.[1] MEG has also been shown to exert beneficial effects when administered to porcine models of severe hemorragic shock.

The EC_{50} for inhibition of iNOS (LPS treated rat lung) is 11.5 μM, for eNOS (bovine endothelial) 110 μM, and for nNOS (rat brain) 60 μM.[2]

Precautions and Disclaimer

This product is for laboratory research purposes only. Please consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

Storage at 2-8 °C is recommended. The product is hygroscopic, store desiccated.

References

1. Irazuzta, J.E., et al., Mercaptoethylguanidine attenuates inflammation in bacterial menengitis in rabbits. Life Sci., **67(4)**, 365-372 (2000).
2. Szabo, C., et al., Mercaptoethylguanidine and guanidine inhibitors of nitric-oxide synthase react with peroxynitrite and protect against peroxynitrite-induced oxidative damage. J. Biol. Chem., **272**, 9030-9036 (1997).
3. Cuzzocrea, S., et al., Antiinflammatory effects of mercaptoethylguanidine, a combined inhibitor of nitric oxide synthase and peroxynitrite scavenger, in carrageenan-induced models of inflammation. Free Radic. Biol. Med., **24**, 450-459 (1998).

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