

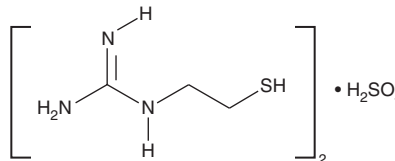
# PRODUCT INFORMATION



## MEG (sulfate)

Item No. 81020

**CAS Registry No.:** 3979-00-8  
**Formal Name:** (2-mercaptoethyl)-guanidine sulfate  
**MF:**  $[C_3H_9N_3S]_2 \cdot H_2SO_4$   
**FW:** 336.4  
**Purity:**  $\geq 98\%$   
**Supplied as:** A crystalline solid  
**Storage:** 4°C  
**Stability:**  $\geq 4$  years



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

### Laboratory Procedures

MEG (sulfate) is supplied as a crystalline solid. Aqueous solutions of MEG (sulfate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of MEG (sulfate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

MEG is a selective iNOS inhibitor and scavenger of peroxynitrite. The EC50 values for inhibition of iNOS (LPS-treated rat lung), eNOS (bovine endothelial), and nNOS (rat brain) are 11.5, 110, and 60  $\mu$ M, respectively.<sup>1</sup> MEG reacts with peroxynitrite with a second order rate constant of 1,900  $M^{-1}s^{-1}$  at 37°C.<sup>2</sup> MEG has potent anti-inflammatory activity, which may be due to the combined effect of MEG acting as an inhibitor of iNOS and as a scavenger of peroxynitrite.<sup>3</sup>

### References

1. Szabó, C., Ferrer-Sueta, G., Zingarelli, B., *et al.* Mercaptoethylguanidine and guanidine inhibitors of nitric-oxide synthase react with peroxynitrite and protect against peroxynitrite-induced oxidative damage. *J. Biol. Chem.* **272**(14), 9030-9036 (1997).
2. Cuzzocrea, S., Zingarelli, B., Hake, P., *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**(3), 450-459 (1998).
3. Southan, G.J., Zingarelli, B., O'Connor, M., *et al.* Spontaneous rearrangement of aminoalkylisothiureas into mercaptoalkylguanidines, a novel class of nitric oxide synthase inhibitors with selectivity towards the inducible isoform. *Br. J. Pharmacol.* **117**(4), 619-632 (1996).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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