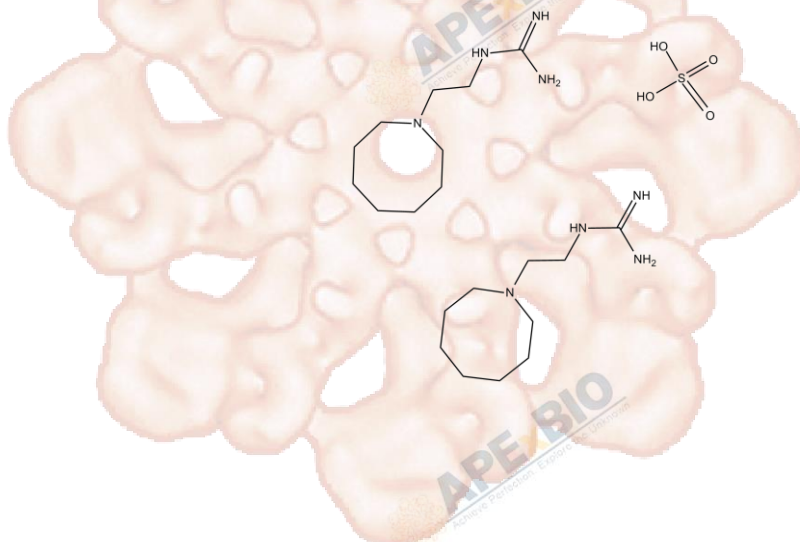


# Product Data Sheet

## Guanethidine Sulfate

<b>Cat. No.:</b>	A8443
<b>CAS No.:</b>	60-02-6
<b>Formula:</b>	C <sub>20</sub> H <sub>44</sub> N <sub>8</sub> ·H <sub>2</sub> O <sub>4</sub> S
<b>M.Wt:</b>	494.7
<b>Synonyms:</b>	
<b>Target:</b>	Others
<b>Pathway:</b>	Others
<b>Storage:</b>	Store at -20°C



### Solvent & Solubility

insoluble in DMSO; insoluble in EtOH;  $\geq 159.4$  mg/mL in H<sub>2</sub>O

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	<b>Concentration</b>			
	<b>1 mM</b>	2.0214 mL	10.1071 mL	20.2143 mL
	<b>5 mM</b>	0.4043 mL	2.0214 mL	4.0429 mL
	<b>10 mM</b>	0.2021 mL	1.0107 mL	2.0214 mL

Please refer to the solubility information to select the appropriate solvent.

### Biological Activity

Shortsummary

Antihypertensive compound

IC<sub>50</sub> & Target

In Vitro

#### Cell Viability Assay

Cell Line:	the electrically stimulated mouse vas deferens
Preparation method:	This compound is soluble in DMSO. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	3 $\mu$ M

	Applications:	In the electrically stimulated mouse vas deferens, Guanethidine sulfate inhibited twitching by 95%±3% in 15 min, but this effect was only partially reversed after 1 h of washing (33%±12% of control).
In Vivo	<b>Animal experiment</b>	
	Animal models:	Myocardial infarction (MI) rat model
	Dosage form:	low-dose [LG], 1 mg/kg/day; medium-dose, 3 mg/kg/day; high-dose, 10 mg/kg/day; administered via an osmotic mini-pump for 4 weeks
	Applications:	In myocardial infarction (MI) rats, LG suppressed left ventricular (LV) dilation (9.2±0.9 mm vs.11.0±0.8 mm) and improved LV fractional shortening (25.0±4.5% vs. 16.4±4.7%) in association with a reduction of plasma NE levels (520±250 pg/ml vs.1,000±570 pg/ml). Low-dose guanethidine reduced 24-h (6%) and 28-day mortality (6%). High-dose guanethidine also reduced 24-h mortality (12%) but increased 28-day mortality (91%).
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

## Product Citations

1. Turner T, Chen X, et al. "FGF21 increases water intake, urine output and blood pressure in rats." PLoS One. 2018 Aug 14;13(8):e0202182.PMID:30106981

See more customer validations on [www.apexbt.com](http://www.apexbt.com).

## References

- [1]. Joyce PI1,Rizzi D,Caló G,Rowbotham DJ,Lambert DG. The effect of guanethidine and local anesthetics on the electrically stimulated mouse vas deferens.Anesth Analg.2002 Nov;95(5):1339-43, table of contents.
- [2]. Igawa A1, Nozawa T, Fujii N, et al. Long-term treatment with low-dose, but not high-dose, guanethidine improves ventricular function and survival of rats with heart failure after myocardial infarction. J Am Coll Cardiol. 2003 Aug 6;42(3):541-8.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



**APExBIO Technology**

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