Aminoguanidine hemisulfate salt

Product Number: A7009
Store at Room Temperature

**Product Description**

Molecular Formula: \( \text{CH}_6\text{N}_4 \cdot 0.5\text{H}_2\text{O}_4\text{S} \)
Molecular Weight: 123.1
CAS Number: 996-19-0

This product is a selective inhibitor of inducible nitric oxide (NO) synthase (NOS).\(^1\) This is in contrast to the standard inhibitors of nitric oxide synthase, including L-N\(^{3}\)-methyl-L-arginine acetate (Product no. M 7033), which do not distinguish between the inducible forms (calcium-independent enzyme in vascular endothelium cells) and constitutive forms (continuously present, but not always active, calcium/calmodulin dependent enzyme of neuronal cells) of nitric oxide synthase.

In addition to inhibition of inducible NOS, this product has been shown to selectively inhibit the cytokine-inducible isoform of NO synthase, responsible for the excess production of NO implicated in the pathogenesis of a variety of inflammatory and immunologically mediated diseases, as well as complications of diabetes. Aminoguanidine was shown to have the same potency as N\(^{3}\)-monomethyl-L-arginine as an inhibitor of the cytokine-induced isoform of NO synthase, but was 10 to 100-fold less potent as an inhibitor of the constitutive isoform.\(^2\) Therefore, this product may be useful in the treatment of the disease states caused by an overproduction of NO.

This product has also been shown to affect rat liver arginase\(^3\) as well as play a role in the respiratory cytopathology of pertussis.\(^4\)

**Precautions and Disclaimer**

For Laboratory Use Only. Not for drug, household or other uses.

**Storage/Stability**

This product is soluble in water (50 mg/ml).

**References**