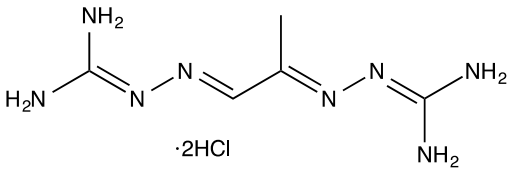
Catalog # 10-4552
Mitoguazone

CAS# 7059-23-6

MGBG, Methylglyoxal bis(guanylhydrazone) dihydrochloride

Lot # FBA2026



Mitoguazone is a potent and reversible inhibitor of S-adenosylmethionine decarboxylase (SAMD or AdoMetDC).[1,2] SAMD is a component of the polyamine-biosynthetic pathway, thus inhibition may lead to changes in polyamine metabolism.[3] Mitoguazone has also been shown to inhibit diamine oxidase and induce spermidine/spermine N-acetyltransferase.[4,5] Mitoguazone has been examined as a potential anti-cancer treatment because of its ability to inhibit polyamine synthesis.[6]

1) Williams-Ashman et al., (1972), *Methylglyoxal bis(guanylhydrazone) as a potent inhibitor of mammalian and yeast S-adenosylmethionine decarboxylases; Biochem.Biophys.Res.Commun.* ***46*** *288*
2) Corti et al., (1974), *Specific inhibition of enzymic decarboxylation of S-adenosylmethionine by methylglyoxal bis(guanylhydrazone) and related substances*; Biochem. J. **139** 351
3) Williams-Ashman and Seidenfeld, (1986), *Aspects of the biochemical pharmacology of methylglyoxal bis(guanylhydrazone);* Biochem. Pharmacol. **35** 1217
4) Janne and Morris, (1984), *Inhibition of S-adenosylmethionine decarboxylase and diamine oxidase activities by analogues of methylglyoxal bis(guanylhydrazone) and their cellular uptake during lymphocyte activation;* Biochem. J. **218** 947
5) Pegg et al., (1985) *Induciton of spermidine/spermine N-acetyltransferase by methylglyoxal bis(guanylhydrazone) Biochim. Biophys. Acta* **842** 111
6) Porter and Janne (2012) Modulation of Antineoplastic Drug Action by Inhibitors of Polyamine Biosynthesis. *In Inhibition of polyamine metabolism: Biological Significance and Basis for new Therapies*; McCann, Ed.; Elsevier; pp.203-248

PHYSICAL DATA

Molecular Weight:	257.13
Molecular Formula:	$C_5H_{12}N_8 \cdot 2HCl$
Purity:	>98% by HPLC
	NMR: (Conforms)
	High Res MS: <1ppm
Solubility:	Soluble in water (> 25 mg/mL) or DMSO (mg/ml).
Physical Description:	White solid
Storage and Stability:	Store as supplied at room temperature for up to 1 year from the date of purchase.

Focus Biomolecules LLC 400 Davis Drive, Suite 600 Plymouth Meeting PA 19462

www.focusbiomolecules.com