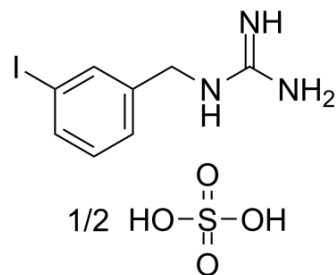


Iobenguane sulfate

Cat. No.:	HY-129040A
CAS No.:	87862-25-7
Molecular Formula:	C ₈ H ₁₀ IN ₃ ·1/2H ₂ O ₄ S
Molecular Weight:	324.13
Target:	Others
Pathway:	Others
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (308.52 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		3.0852 mL	15.4259 mL	30.8518 mL
		5 mM		0.6170 mL	3.0852 mL	6.1704 mL
	10 mM		0.3085 mL	1.5426 mL	3.0852 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (7.71 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (7.71 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (7.71 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Iobenguane sulfate (MIBG sulfate) is an analogue of the neurotransmitter norepinephrine with antitumor activity. Radioiodinated Iobenguane sulfate is clinically used as a tumor-targeted radiopharmaceutical in the diagnosis and treatment of adrenergic tumors. Iobenguane sulfate is a high-affinity substrate for cholera toxin that interferes with cellular mono(ADP-ribosylation) ^{[1][2]} .
In Vitro	Iobenguane sulfate (MIBG sulfate) (2-20 µg/ml; 72 hours) inhibits cell growth in a panel of human and mouse leukemia, fibrosarcoma, melanoma, and neuroblastoma cell lines ^[1] . Iobenguane sulfate (MIBG sulfate) is a potent effector of endogenous mono(ADP-ribosyl) transferases of turkey and human erythrocyte membranes, exerting its effect in the µM concentration range ^[2] .

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay^[1]

Cell Line:	3T3, 3T3-T13, BHK, Py-BHK, K562, L1210, RIF1, M5A, B16, LAN-1, N1E115, CHP212 cells
Concentration:	2, 20µg/ml
Incubation Time:	72 hours
Result:	Inhibits 3T3, 3T3-T13, BHK, Py-BHK, K562, L1210, RIF1, M5A, B16, LAN-1, N1E115, and CHP212 cells growth.

In Vivo

lobenguane sulfate (MIBG hemisulfate) (20 mg/kg; i.p.; daily on days 3-6) shows antitumor activity^[1].

The survival of male strain AF mice inoculates with N1E115 neuroblastoma and treats according to NIH protocols for new drug testing with 9 daily injections of lobenguane sulfate (40 mg/kg), Marking prolongation of sugvival but no cures were observed^[1].

lobenguane sulfate testes for its toxicity on male strain AF (N1E115) mice with 5 daily injections. At 50 mg/kg body weight, all animals died after 1-4 doses and 4/16 animals died on a schedule of 44 mg/kg^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	DBA/2 (L1210) mice ^[1]
Dosage:	i.p.; daily on days 3-6
Administration:	20 mg/kg
Result:	Considerable prolongation of survival and some cures were obtained.

REFERENCES

[1]. Loesberg C, et al. Meta-iodobenzylguanidine (MIBG), a novel high-affinity substrate for cholera toxin that interferes with cellular mono(ADP-ribosylation). Biochim Biophys Acta. 1990 Jan 19;1037(1):92-9.

Caution: Product has not been fully validated for medical applications. For research use only.

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