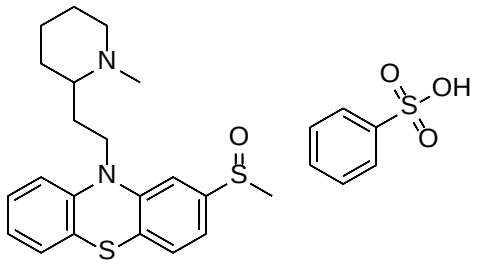
Product data sheet

MedKoo Cat#: 318193 Name: Mesoridazine Besylate CAS: 32672-69-8 (besylate) Chemical Formula: $C_{27}H_{32}N_2O_4S_3$ Molecular Weight: 544.743	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
Mesoridazine besylate is a phenothiazine dopamine receptor anatagonist. Mesoridazine besylate is described to demonstrate inhibition for D2DR and D4DR. It has a high affinity for dopamine D4 receptor. Mesoridazine besylate is an antipsychotic agent.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.84 mL	9.18 mL	18.36 mL
5 mM	0.37 mL	1.84 mL	3.67 mL
10 mM	0.18 mL	0.92 mL	1.84 mL
50 mM	0.04 mL	0.18 mL	0.37 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Su Z, Martin R, Cox BF, Gintant G. Mesoridazine: an open-channel blocker of human ether-a-go-go-related gene K+ channel. J Mol Cell Cardiol. 2004 Jan;36(1):151-60. doi: 10.1016/j.yjmcc.2003.10.017. PMID: 14734057.

In vivo study

1. Liu KS, Chen YW, Aljuffali IA, Chang CW, Wang JJ, Fang JY. Topically applied mesoridazine exhibits the strongest cutaneous analgesia and minimized skin disruption among tricyclic antidepressants: The skin absorption assessment. Eur J Pharm Biopharm. 2016 Aug;105:59-68. doi: 10.1016/j.ejpb.2016.05.025. Epub 2016 May 31. PMID: 27260201.
2. Chen YW, Chu CC, Chu KS, Shieh JP, Chien CC, Wang JJ, Kao CH. Phenothiazine-type antipsychotics elicit cutaneous analgesia in rats. Acta Anaesthesiol Taiwan. 2010 Mar;48(1):3-7. doi: 10.1016/S1875-4597(10)60002-1. PMID: 20434106.

7. Bioactivity
Biological target:

Mesoridazine (TPS-23) benzenesulfonate, a metabolite of Thioridazine (HY-B0965A), acts as an orally active phenothiazine antipsychotic agent.

In vitro activity

Mesoridazine blocked HERG currents in a concentration-dependent manner (IC_{50} 550 nM at 0 mV); block increased significantly over the voltage range where HERG activates and saturated at voltages eliciting maximal HERG channel activation.

Product data sheet

Reference: J Mol Cell Cardiol. 2004 Jan;36(1):151-60. https://pubmed.ncbi.nlm.nih.gov/14734057/

In vivo activity

Using a subcutaneous injection model in rats, this study tested the cutaneous analgesic effects of six phenothiazine-type antipsychotics (mesoridazine, promazine, chlorpromazine, fluphenazine, perphenazine and trifluprom azine) at a dose of 0.6 mumol, and compared them with those of bupivacaine and lidocaine. Mesoridazine had a longer duration of action than bupivacaine ($p<0.001$). In terms of ED(50) values, mesoridazine was more potent and longer-acting than bupivacaine and lidocaine ($p<0.01$ for each comparison).

Reference: Acta Anaesthesiol Taiwan. 2010 Mar;48(1):3-7. https://pubmed.ncbi.nlm.nih.gov/20434106/