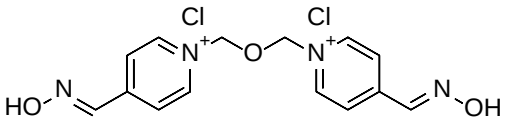
Product data sheet

MedKoo Cat#: 527959 Name: Obidoxime chloride CAS: 114-90-9 (Cl) Chemical Formula: $C_{14}H_{16}Cl_2N_4O_3$ Exact Mass: 358.0599 Molecular Weight: 359.207	
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:
Obidoxime chloride is a cholinesterase reactivator occurring in two interchangeable isomeric forms, syn and anti.

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
PBS (pH 7.2)	10.0	27.84

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.78 mL	13.92 mL	27.84 mL
5 mM	0.56 mL	2.78 mL	5.57 mL
10 mM	0.28 mL	1.39 mL	2.78 mL
50 mM	0.06 mL	0.28 mL	0.56 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

TBD

In vivo study

1. Krishnan JKS, Arun P, Appu AP, Vijayakumar N, Figueiredo TH, Braga MFM, Baskota S, Olsen CH, Farkas N, Dagata J, Frey WH 2nd, Moffett JR, Namboodiri AMA. Intranasal delivery of obidoxime to the brain prevents mortality and CNS damage from organophosphate poisoning. Neurotoxicology. 2016 Mar;53:64-73. doi: 10.1016/j.neuro.2015.12.020. Epub 2016 Jan 2. PMID: 26751814; PMCID: PMC4808345.
2. Soukup O, Tobin G, Kumar UK, Jun D, Fusek J, Kuca K. Characterization of the anticholinergic properties of obidoxime; functional examinations of the rat atria and the urinary bladder. Toxicol Mech Methods. 2010 Sep;20(7):428-33. doi: 10.3109/15376516.2010.497974. PMID: 20602545.

7. Bioactivity
Biological target:

Obidoxime dichloride is a non-full spectrum oxime agent and can be used as an antidote for organophosphate nerve agent poisoning.

In vitro activity

TBD

Product data sheet

In vivo activity

Intranasally administered OBD (obidoxime) was effective in partially reducing paraoxon-induced acetylcholinesterase inhibition in the brain and substantially reduced seizure severity and duration. Further, intranasal OBD completely prevented mortality, which was 41% in the animals given standard treatment plus intranasal saline. Fluoro-Jade-B staining revealed extensive neuronal degeneration in the surviving saline-treated animals 24h after paraoxon administration, whereas no detectable degenerating neurons were observed in any of the animals given intranasal OBD 30min before or 5min after paraoxon administration

Reference: Neurotoxicology. 2016 Mar;53:64-73. https://pubmed.ncbi.nlm.nih.gov/26751814/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.