Pralidoxime

Cat. No.: HY-B1738

CAS No.: 6735-59-7

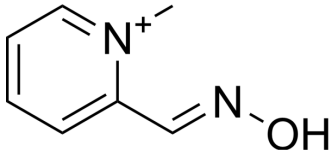
Molecular Formula: $C_7H_9N_2O^+$

Molecular Weight: 137.16

Target: Cholinesterase (ChE)

Pathway: Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Pralidoxime is a potent reactivator of acetylcholinesterase (AChE). Pralidoxime reactivates nerve agent-inhibited AChE via direct nucleophilic attack by the oxime moiety on the phosphorus center of the bound nerve agent. Pralidoxime is an antidote for organophosphate poisoning[1][2].
IC_{50} & Target	AChE
In Vivo	Pralidoxime (10-150 mg/kg; intramuscular administration, once) reverses paraoxon-induced respiratory toxicity in mice[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	F1B6D2 mice (male, administered subcutaneously diethylparaoxon)[3]
Dosage:	10, 50, 100, and 150 mg/kg
Administration:	Intramuscular administration, once
Result:	Induced a partial, albeit complete, reversal of respiratory toxicity at 50 mg/kg, and completely reversed diethylparaoxon-induced respiratory toxicity in mice at 150 mg/kg.

REFERENCES

[1]. Cadieux CL, et al. Probing the activity of a non-oxime reactivator for acetylcholinesterase inhibited by organophosphorus nerve agents. Chem Biol Interact. 2016;259(Pt B):133-141.

[2]. Eyer P, Buckley N. Pralidoxime for organophosphate poisoning. Lancet. 2006;368(9553):2110-2111.

[3]. Houzé P, et al. High Dose of Pralidoxime Reverses Paraoxon-Induced Respiratory Toxicity in Mice. Turk J Anaesthesiol Reanim. 2018;46(2):131-138.

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

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