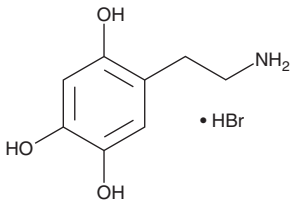
PRODUCT INFORMATION

6-OHDA (hydrobromide)

Item No. 25330

CAS Registry No.:	636-00-0
Formal Name:	5-(2-aminoethyl)-1,2,4-benzenetriol, monohydrobromide
Synonyms:	6-hydroxy Dopamine, Oxidopamine, 2,4,5-Trihydroxyphenethylamine
MF:	$C_8H_{11}NO_3$ • HBr
FW:	250.1
Purity:	≥95%
UV/Vis.:	λ_{max}: 296 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

6-OHDA (hydrobromide) is supplied as a crystalline solid. A stock solution may be made by dissolving the 6-OHDA (hydrobromide) in the solvent of choice. 6-OHDA (hydrobromide) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of 6-OHDA (hydrobromide) in these solvents is approximately 5, 15, and 25 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 6-OHDA (hydrobromide) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 6-OHDA (hydrobromide) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

6-OHDA is a catecholaminergic neurotoxin that has been used to induce dopaminergic lesions and parkinsonian symptoms as a model of Parkinson's disease in rodents.[1] It induces locomotor impairment in mice and loss of tyrosine hydroxylase-reactive neurons in mouse brain when administered into the substantia nigra, medial forebrain bundle (MFB), or striatum at doses of 9, 6, and 18 µg, respectively.[2] Intracisternal administration of 6-OHDA (200 µg) decreases dopamine (Item No. 21992) and norepinephrine (Item No. 16673) levels in rat brain.[3] It induces apoptosis in primary rat cortical cells and PC12 rat adrenal cells when used at a concentration of 50 µM.[4,5] 6-OHDA (75 µM) activates caspase-3, -8, and -9 in a time-dependent manner and increases the level of intracellular reactive oxygen species (ROS) in PC12 cells and induces apoptosis in rat substantia nigra when stereotaxically injected into the right MFB.[5,6]

References

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3. Breese, G.R. and Traylor, T.D. *J. Pharmacol. Exp. Ther.* **174(3)**, 413-420 (1970).
4. Han, B.S., Noh, J.S., Gwag, B.J., *et al. Neurosci. Lett.* **341(2)**, 99-102 (2003).
5. Fujita, H., Ogino, T., Kobuchi, H., *et al. Brain Res.* **1113(1)**, 10-23 (2006).
6. He, Y., Lee, T., and Leong, S.K. *Brain Res.* **858(1)**, 163-166 (2000).

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