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DATASHEET

6-Hydroxydopamine (6-OHDA) hydrobromide

Product overview

Name	6-Hydroxydopamine (6-OHDA) hydrobromide
Cat No	HB1889
Alternative names	6-OHDA, Oxidopamine
Biological action	Toxin
Purity	>98%
Description	Neurotoxin, widely used to produce the 6-OHDA Parkinson's disease model

Biological Data

Biological description	6-hydroxydopamine hydrobromide (6-OHDA) is widely used to lesion the nigrostriatal dopaminergic system as a model of Parkinson's disease (6-OHDA lesion model). 6-OHDA is commonly unilaterally administered into the medial forebrain bundle (MFB), substantia nigra or striatum to induce a selective depletion of dopamine neurons to reproduce behavioural deficits seen in Parkinson's disease. Varying degrees of neurodegeneration occur depending on site of administration. Unilateral administration of 6-OHDA into one hemisphere (hemiparkinsonian model) permits assessment of a quantifiable turning behaviour which can be correlated with the magnitude of the nigrostriatal lesions. Bilateral 6-OHDA lesion models may also be used.
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Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in water (100 mM) and in DMSO (100 mM)
Handling	This compound is very air and light sensitive; exposure to air/light may affect compound performance. We therefore recommend storing the solid material at -20°C in a sealed jar, in the dark and protect from light. As the compound is hygroscopic, dessicate if possible.
	Do not store the material in solution; make up solutions and use immediately. Protect from light. Solutions can be prepared using oxygen free water containing 0.1% sodium metabisulfite.
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name	5-(2-Aminoethyl)-1,2,4-benzenetriol hydrobromide
Molecular Weight	250.09
Chemical structure	The chemical structure shows a benzene ring with three hydroxyl groups (OH) at positions 1, 2, and 4. A 2-aminoethyl group (-CH2CH2NH2) is attached to the ring at position 5. The structure is labeled with "HBr" indicating it is the hydrobromide salt.

Chemical name	5-(2-Aminoethyl)-1,2,4-benzenetriol hydrobromide
Molecular Formula	C ₈ H ₁₁ NO ₃ · HBr
CAS Number	636-00-0
PubChem identifier	176170
SMILES	C1=C(C(=CC(=C1O)O)O)CCN.Br
InChi	InChI=1S/C8H11NO3.BrH/c9-2-1-5-3-7(11)8(12)4-6(5)10;/h3-4,10-12H,1-2,9H2;1H
InChiKey	MLACDGUOKDOLGC-UHFFFAOYSA-N
MDL number	MFCD00012894
Appearance	Off-white to brown solid

References

A guide to neurotoxic animal models of Parkinson's disease.

Tieu K (2011) Cold Spring Harb Perspect Med 1(1)

Unilateral Lesion of Dopamine Neurons Induces Grooming Asymmetry in the Mouse.

Pelosi et al (2015) PLoS One 10(9)

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Limitations of animal models of Parkinson's disease.

Potashkin et al (2010) Parkinsons Dis 2011:658083

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Behavioral characterization of a unilateral 6-OHDA-lesion model of Parkinson's disease in mice.

Iancu et al (2005) Behav Brain Res. 162(1)

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