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DATASHEET

$\pm$ -Octopamine hydrochloride

Product overview

Name	$\pm$ -Octopamine hydrochloride
Cat No	HB2791
Alternative names	Epinenor, Norfen
Biological action	Activator
Purity	>99%
Description	Invertebrate neurotransmitter. Chemogenetic DmOct β 1 receptor activator.

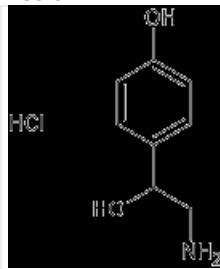
Biological Data

Biological description	Invertebrate neurotransmitter which is structurally related to noradrenaline. Acts as a neurohormone, neuromodulator and neurotransmitter in invertebrates. Gas-coupled DmOct β 1 receptor (EC ₅₀ value = ~12 nM at DmOct β 1R). Shown to activate the chemogenetic Gas-coupled DmOct β 1 receptor in mouse excitatory neurons of the hippocampus to elevate cAMP levels in tissue expressing the receptor. This approach has been shown to make animals resilient to memory deficits normally caused by sleep loss and to render hippocampal synaptic plasticity resilient to sleep deprivation.
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Solubility & Handling

Storage instructions	Room temperature
Solubility overview	Soluble in water (100 mM)
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	($\pm$)-2-Amino-1-(4-hydroxyphenyl)ethanol hydrochloride
Molecular Weight	189.6
Chemical structure	 The chemical structure shows a benzene ring with a hydroxyl group (-OH) at the top position and a 1-aminoethyl group (-CH(CH₃)-NH₂) at the bottom position. To the left of the ring is the label "HCl", indicating the hydrochloride salt form.
Molecular Formula	C ₈ H ₁₁ NO ₂ .HCl
CAS Number	770-05-8
PubChem identifier	102484
SMILES	C1=CC(=CC=C1C(CN)O)O.Cl
InChi	InChI=1S/C8H11NO2.ClH/c9-5-8(11)6-1-3-7(10)4-2-6;/h1-4,8,10-11H,5,9H2;1H
InChiKey	PUMZXCBVHLCWQG-UHFFFAOYSA-N
MDL number	MFCD00012881

References

Selective inhibition of adenylyl cyclase by octopamine via a human cloned alpha 2A-adrenoceptor.

Airriess CN et al (1997) British journal of pharmacology 122
PubMedID [9313925](#)

Octopamine in invertebrates.

Roeder T (1999) Progress in neurobiology 59
PubMedID [10515667](#)

Chemogenetic Enhancement of cAMP Signaling Renders Hippocampal Synaptic Plasticity Resilient to the Impact of Acute Sleep Deprivation.

Walsh EN et al (2023) eNeuro 10
PubMedID [36635248](#)
