Hello Bio, Inc.
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500
F. 609-228-4994

customercare-usa@hellobio.com

DATASHEET

±-Octopamine hydrochloride

Product overview

Name	±-Octopamine hydrochloride
Cat No	HB2791
Alternative names	Epirenor, Norfen
Biological action	Activator
Purity	>99%
Description	Invertebrate neurotransmitter. Chemogenetic DmOctβ1 receptor activator.

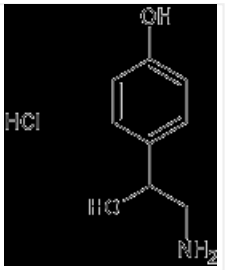
Biological Data

Biological description	Invertebrate neurotransmitter which is structurally related to noradrenaline. Acts as a neurohormone, neuromodulator and neurotransmitter in invertebrates. Gαs-coupled DmOctβ1 receptor (EC_{50} value = ~12 nM at DmOctβ1R). Shown to activate the chemogenetic Gαs-coupled DmOctβ1 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.

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	(±)-2-Amino-1-(4-hydroxyphenyl)ethanol hydrochloride
Molecular Weight	189.6
Chemical structure	
Molecular Formula	$C_8H_{11}NO_2.HCl$
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