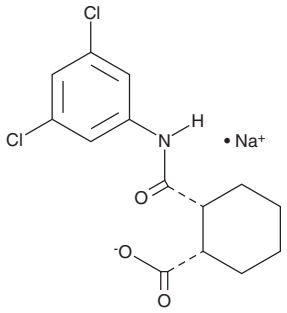
PRODUCT INFORMATION

VU0155041 (sodium salt)

Item No. 21775

CAS Registry No.:	1259372-69-4
Formal Name:	(1R,2S)-*rel*-2-[[(3,5-dichlorophenyl)amino] carbonyl]-cyclohexanecarboxylic acid, monosodium salt
MF:	$C_{14}H_{14}Cl_2NO_3 \bullet Na$
FW:	338.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 217, 252 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

VU0155041 (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the VU0155041 (sodium salt) in the solvent of choice, which should be purged with an inert gas. VU0155041 (sodium salt) is soluble in the organic solvent DMSO at a concentration of approximately 1 mg/ml.

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 VU0155041 (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of VU0155041 (sodium salt) in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

VU0155041 is a positive allosteric modulator of metabotropic glutamate receptor 4 (mGluR4) with an EC_{50} value of 2.5 µM for glutamate response in a thallium flux assay.[1] It is selective for mGluR4, exhibiting no effect on radioligand binding at 67 G protein-coupled receptors, ion channels, and transporters, and lacking antagonist activity at NMDA receptors in striatal medium spiny neurons at a concentration of 10 µM. *In vivo*, VU0155041 decreases catalepsy induced by haloperidol (Item No. 12014) and reverses askinesias induced by reserpine (Item No. 16474) in rat models of Parkinson's disease. Chronic treatment with VU0155041 restores social behavior in the $Oprm^{-/-}$ mouse model of autism.[2] It also increases the percentage of time spent in the open arms of the elevated plus maze, a measure of decreased anxiety, in mice.[3]

References

1. Niswender, C.M., Johnson, K.A., Weaver, C.D., *et al.* Discovery, characterization, and antiparkinsonian effect of novel positive allosteric modulators of metabotropic glutamate receptor 4. *Mol. Pharmacol.* **74(5),** 1345-1358 (2008).
2. Becker, J.A., Clesse, D., Spiegelhalter, C., *et al.* Autistic-like syndrome in mu opioid receptor null mice is relieved by facilitated mGluR4 activity. *Neuropsychopharmacology* **39(9)**, 2049-2060 (2014).
3. Duvoisin, R.M., Villasana, L., Davis, M.J., *et al.* Opposing roles of mGluR8 in measures of anxiety involving non-social and social challenges. *Behav. Brain Res.* **221(1)**, 50-54 (2011).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM