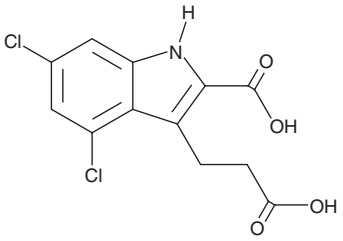
PRODUCT INFORMATION

MDL 29951

Item No. 16266

CAS Registry No.:	130798-51-5
Formal Name:	2-carboxy-4,6-dichloro-1H-indole-3-propanoic acid
MF:	$C_{12}H_9Cl_2NO_4$
FW:	302.1
Purity:	≥98%
UV/Vis.:	λ_{max}: 309 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

MDL 29951 is supplied as a crystalline solid. A stock solution may be made by dissolving the MDL 29951 in the solvent of choice, which should be purged with an inert gas. MDL 29951 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of MDL 29951 in these solvents is approximately 0.25, 10, and 5 mg/ml, respectively.

MDL 29951 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MDL 29951 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. MDL 29951 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NMDA receptors are neuroreceptors that have binding sites for glycine or D-serine as well as L-glutamate.[1] MDL 29951 is an antagonist of NMDA receptors with high affinity for the glycine binding site (K_i = 140 nM).[2] It is functional both *in vitro* and *in vivo*.[2] MDL 29951 blocks NMDA receptor-dependent convulsions in audiogenic seizure-susceptible DBA/2J mice.[2] It is used to evaluate the role of the glycine site of the NMDA receptor in neurological signaling.[3,4] MDL 29951 is also an agonist of the G protein-coupled receptor GPR17 (EC_{50} values range from 7 nM to 6 µM, depending on the assay).[5] GPR17 is thought to be involved in oligodendrocyte differentiation and myelin formation/repair.[5]

References

1. Karakas, E. and Furukawa, H. Crystal structure of a heterotetrameric NMDA receptor ion channel. *Science* **344(6187)**, 992-997 (2014).
2. Baron, B.M., Harrison, B.L., McDonald, I.A., *et al.* Potent indole- and quinoline-containing N-methyl-D-aspartate antagonists acting at the strychnine-insensitive glycine binding site. *J. Pharmacol. Exp. Ther.* **262(3)**, 947-956 (1992).
3. Millan, M.J. and Seguin, L. Chemically-diverse ligands at the glycine B site coupled to N-methyl-D-aspartate (NMDA) receptors selectively block the late phase of formalin-induced pain in mice. *Neurosci. Lett.* **178(1)**, 139-143 (1994).
4. Heppenstall, P.A. and Fleetwood-Walker, S.M. The glycine site of the NMDA receptor contributes to neurokinin1 receptor agonist facilitation of NMDA receptor agonist-evoked activity in rat dorsal horn neurons. *Brain Res.* **744(2)**, 235-245 (1997).
5. Hennen, S., Wang, H., Peters, L., *et al.* Decoding signaling and function of the orphan G protein-coupled receptor GPR17 with a small-molecule agonist. *Sci. Signal.* **6(298)**, 2-16 (2013).

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