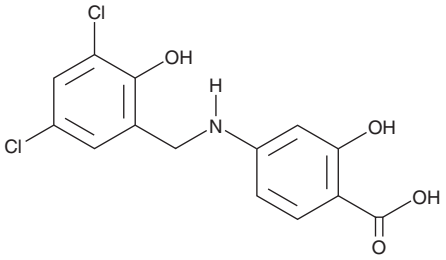
PRODUCT INFORMATION

ZL006

Item No. 34147

CAS Registry No.:	1181226-02-7
Formal Name:	4-[[(3,5-dichloro-2-hydroxyphenyl) methyl]amino]-2-hydroxy-benzoic acid
MF:	$C_{14}H_{11}Cl_2NO_4$
FW:	328.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 310 nm
Supplied as:	A 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

ZL006 is supplied as a solid. A stock solution may be made by dissolving the ZL006 in the solvent of choice, which should be purged with an inert gas. ZL006 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ZL006 in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

ZL006 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ZL006 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. ZL006 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

ZL006 is an inhibitor of the protein-protein interaction between neuronal nitric oxide synthase (nNOS) and postsynaptic density protein-95 (PSD-95).[1] It inhibits NMDA-induced lactate dehydrogenase release (IC_{50} = 0.082 µM), as well as glutamate and glycine-induced, NMDA receptor-dependent production of nitric oxide (NO), in primary mouse neurons. ZL006 (1.5 mg/kg) prevents ischemia-induced increases in nNOS-PSD-95 complex formation in cortices isolated from a mouse model of ischemia-reperfusion injury induced by middle cerebral artery occlusion (MCAO). It reduces infarct size and increases survival in the same model. ZL006 suppresses mechanical and cold allodynia in a mouse model of neuropathic pain induced by paclitaxel (Item No. 10461).[2]

References

1. Zhou, L., Li, F., Xu, H.-B., *et al*. Treatment of cerebral ischemia by disrupting ischemia-induced interaction of nNOS with PSD-95. *Nat. Med.* **16(12)**, 1439-1443 (2010).
2. Lee, W.-H., Xu, Z., Ashpole, N.M., *et al*. Small molecule inhibitors of PSD95-nNOS protein-protein interactions as novel analgesics. *Neuropharmacology* **97**, 464-475 (2015).

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