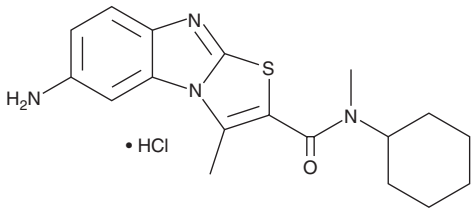
PRODUCT INFORMATION

YM-298198 (hydrochloride)

Item No. 22925

CAS Registry No.: 1216398-09-2
Formal Name: 6-amino-N-cyclohexyl-N,3-dimethyl-thiazolo[3,2-a] benzimidazole-2-carboxamide, monohydrochloride
MF: $C_{18}H_{22}N_4OS \bullet HCl$
FW: 378.9
Purity: ≥98%
UV/Vis.: λ_{max}: 220, 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

YM-298198 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the YM-298198 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. YM-298198 (hydrochloride) is soluble in DMSO at a concentration of approximately 25 mg/ml.

YM-298198 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, YM-298198 (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. YM-298198 (hydrochloride) has a solubility of approximately 0.11 mg/ml in a 1:8 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

YM-298198 is a non-competitive antagonist of the metabotropic glutamate receptor type I (mGluR1; K_i = 19 nM).[1] It is selective for mGluR1 over mGluR2-7 (IC_{50}s = 0.016 and >10 µM, respectively). YM-298198 binds to rat cerebellum membranes (K_i = 20 nM). *In vivo*, YM-298198 (10 and 30 mg/kg, p.o.) increases nociceptive response latency in a mouse model of hyperalgesia induced by streptozotocin (Item No. 13104) without affecting motor coordination in a rotarod test. YM-298198 also reduces reinstatement of drug-seeking behavior induced by cocaine priming in rats.[2]

References

1. Kohara, A., Toya, T., Tamura, S., *et al.* Radioligand binding properties and pharmacological characterization of 6-amino-N-cyclohexyl-N,3-dimethylthiazolo[3,2-a]benzimidazole-2-carboxamide (YM-298198), a high-affinity, selective, and noncompetitive antagonist of metabotropic glutamate receptor type 1. *J. Pharmacol. Exp. Ther.* **315(1)**, 163-169 (2005).
2. Schmidt, H.D., Kimmey, B.A., Arreola, A.C., *et al.* Group I metabotropic glutamate receptor-mediated activation of PKC gamma in the nucleus accumbens core promotes the reinstatement of cocaine seeking. *Addict. Biol.* **20(2)**, 285-296 (2015).

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