

Product Data Sheet

Product Name: TCS OX2 29

Cat. No.: GC10549

Chemical Properties

Cas. No. 372523-75-6

Chemical Name (S)-1-(6,7-dimethoxy-3,4-dihydroisoquinolin-2(1H)-yl)-3,3-dimethyl-2-((pyridin-4-ylmethyl)amino)butan-1-one hydrochloride

SMILES O=C([C@H](C(C)(C)C)NCC1=CC=NC=C1)N(CC2=C3)CCC2=CC(OC)=C3OC.Cl

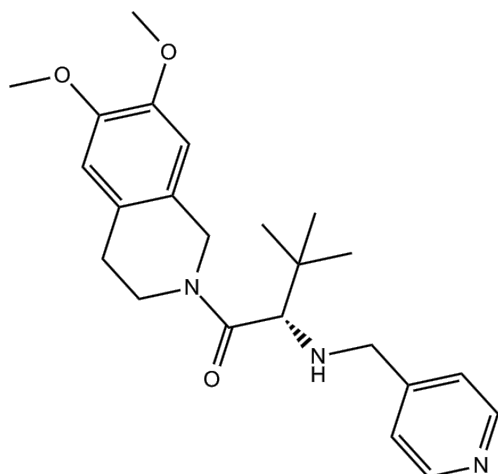
Formula $C_{23}H_{31}N_3O_3$ M.Wt 397.51

Solubility DMF: 30 mg/ml, DMSO: 30 mg/ml, PBS (pH 7.2): 10 mg/ml Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

TCS-OX2-29 is a potent, high affinities and selective orexin-2 receptor (OX2R) antagonist with an IC₅₀ value of 40 nM and a pK_i value of 7.5. TCS-OX2-29 displays ~250-fold selectivity for OX2 over OX1[1][2].

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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TCS-OX2-29 inhibits orexin A induced IP3 accumulation and ERK1/2 phosphorylation in CHO cells transfected with the OX2 receptor[2].

TCS-OX2-29 (5-10 mg/kg; intraperitoneal injection; adult male NMRI mice) treatment suppresses conditioned place preference (CPP) acquisition and expression in both naïve and dependent mice significantly[3].

References:

- [1]. Hirose M et al. N-acyl 6,7-dimethoxy-1,2,3,4-tetrahydroisoquinoline: the first orexin-2 receptor selective non-peptidic antagonist. *Bioorg Med Chem Lett*, 2003 Dec 15, 13(24):4497-9.
- [2]. Tabaeizadeh M, et al. The differential effects of OX1R and OX2R selective antagonists on morphine conditioned place preference in naïve versus morphine-dependent mice. *Behav Brain Res*. 2013 Jan 15;237:41-8.
- [3]. R Mould et al. Binding kinetics differentiates functional antagonism of orexin-2 receptor ligands. *Br J Pharmacol*. 2014 Jan; 171(2): 351-363.

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