Product Data Sheet

Product Name: LY 225910
Cat. No.: GC11305

Chemical Properties

Cas. No.	133040-77-4		
Chemical Name	2-(2-(5-bromo-1H-indol-3-yl)ethyl)-3-(3-isopropoxyphenyl)quinazolin-4(3H)-one		
SMILES	BrC1=CC=C2NC=C(C2=C1)CCC(N3C4=CC=CC(OC(C)C)=C4)=NC5=CC=CC=C5C3=O		
Formula	$C_{27}H_{24}BrN_3O_2$	M.Wt	502.41
Solubility	Soluble to 100 mM in DMSO	Storage	Desiccate at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	LY 225910		

Protocol

Animal experiment [1]:

Animal models	Sprague-Dawley rats
Preparation Method	Rats were intraperitoneally administered a single dose of LY 225910 (0.1mg/kg) and behavioral tests (Elevated Plus Maze, Novel Object Recognition) were conducted at acute and 24-hour time points.
Dosage form	0.1mg/kg; i.p.; Single injection.

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Applications	LY 225910 exhibited anxiolytic-like effects within 24 hours, but at 24 hours post-administration, LY 225910 impaired the rats' novel object recognition and spatial recognition abilities.

References:
[1] Ballaz SJ, Bourin M, Akil H, et al. Blockade of the cholecystokinin CCK-2 receptor prevents the normalization of anxiety levels in the rat. Prog Neuropsychopharmacol Biol Psychiatry. 2020 Jan 10;96:109761.

Background

LY 225910 is a potent and selective cholecystokinin receptor antagonist that specifically blocks the CCK2 receptor and influences neurotransmitter release[1-2]. LY 225910 is utilized to investigate the role of the CCK2 receptor in brain processes such as emotion, anxiety, and pain, as well as its modulation of GABAergic neurotransmission[3-4].

In vivo, LY 225910 (25ng; single injection) administered intrathecally in a rat model of lipopolysaccharide-induced central nervous system inflammation enhances the analgesic effects of morphine[5]. LY 225910 (0.1mg/kg) was administered as a single intraperitoneal injection to male Sprague-Dawley rats. LY 225910 exhibited anxiolytic-like effects within 24 hours, but at 24 hours post-administration, LY 225910 impaired the rats' novel object recognition and spatial recognition abilities[6].

References:
[1] Crosby KM, Baimoukhametova DV, Bains JS, et al. Postsynaptic Depolarization Enhances GABA Drive to Dorsomedial Hypothalamic Neurons through Somatodendritic Cholecystokinin Release. J Neurosci. 2015 Sep 23;35(38):13160-70.
[2] Rust VA, Crosby KM. Cholecystokinin acts in the dorsomedial hypothalamus of young male rats to suppress appetite in a nitric oxide-dependent manner. Neurosci Lett. 2021 Nov 1;764:136295.
[3] Lee JH, Kim SY, Kwon YK, et al. Characteristics of the cholecystokinin-induced depolarization of pacemaking activity in cultured interstitial cells of Cajal from murine small intestine. Cell

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[4] Soltani N, Roohbakhsh A, Allahtavakoli M, et al. Heterogeneous effects of cholecystokinin on neuronal response properties in deep layers of rat barrel cortex. Somatosens Mot Res. 2018 Jun;35(2):131-138.
[5] Xanthos DN, Kumar N, Theodorsson E, et al. The roles of nerve growth factor and cholecystokinin in the enhancement of morphine analgesia in a rodent model of central nervous system inflammation. Neuropharmacology. 2009 Mar;56(3):684-91.
[6] Ballaz SJ, Bourin M, Akil H, et al. Blockade of the cholecystokinin CCK-2 receptor prevents the normalization of anxiety levels in the rat. Prog Neuropsychopharmacol Biol Psychiatry. 2020 Jan 10;96:109761.

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