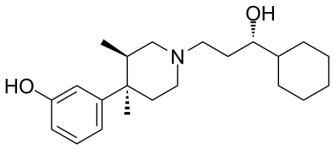
LY255582

Cat. No.:	HY-118949
CAS No.:	119193-09-8
Molecular Formula:	$C_{22}H_{35}NO_2$
Molecular Weight:	345.52
Target:	Opioid Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	LY255582 is a pan-opioid antagonist and has high affinity for mu, delta, and kappa receptors (K_i: 0.4 nM, 5.2, 2.0 nM respectively). LY255582 can decrease food intake and body weight. LY255582 can be used for the research of obesity[1][2][3][4].

IC_{50} & Target	μ Opioid Receptor/MOR	δ Opioid Receptor/DOR	κ Opioid Receptor/KOR
	0.4 nM (Ki)	5.2 nM (Ki)	2.0 nM (Ki)

In Vitro	LY255582 (40 μM, 24-72 h) reduces cell viability of Huh7 and MHCC-97H cells[5]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	LY255582 (100 μg, i.c.v.) reduced food intake in rats[1]. LY255582 (15 mg/kg, s.c., once daily) decreases food intake and body weight gain of fed obese Zucker rats[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	STZ-induced diabetic mice[1]
Dosage:	100, 10 and 1 μg
Administration:	i.c.v.
Result:	Decreased food at 100, 10 and 1 μg by 76, 62 and 29%.

REFERENCES

[1]. Levine AS, et al. Central administration of the opioid antagonist, LY255582, decreases short- and long-term food intake in rats. Brain Res. 1991 Dec 6;566(1-2):193-7.

[2]. Need AB, et al. In vivo rat brain opioid receptor binding of LY255582 assessed with a novel method using LC/MS/MS and the administration of three tracers simultaneously. Life Sci. 2007 Oct 13;81(17-18):1389-96.

[3]. S.L. Gackenheimer, et al. Localization of opioid receptor antagonist [3H]-LY255582 binding sites in mouse brain: Comparison with the distribution of mu, delta and kappa binding sites. Neuropeptides. 2005. 39 (6), 559-567.

[4]. Shaw WN, et al. Long-term treatment of obese Zucker rats with LY255582 and other appetite suppressants. Pharmacol Biochem Behav. 1993 Nov;46(3):653-9.

[5]. Chen DT, et al. The mu-opioid receptor is a molecular marker for poor prognosis in hepatocellular carcinoma and represents a potential therapeutic target. Br J Anaesth. 2019 Jun;122(6):e157-e167.

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