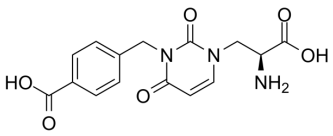
UBP-282

Cat. No.:	HY-19432
CAS No.:	544697-47-4
Molecular Formula:	$C_{15}H_{15}N_3O_6$
Molecular Weight:	333.3
Target:	iGluR
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	UBP-282 is a potent, selective and competitive AMPA and kainate receptor antagonist. UBP-282 inhibits the fast component of the dorsal root-evoked ventral root potential (fDR-VRP) with an IC_{50} value of 10.3 μM. UBP-282 antagonizes kainate-induced depolarisations of dorsal roots with a pA_2 value of 4.96[1][2].
IC_{50} & Target	IC50: 10.3 μM (fast component of the dorsal root-evoked ventral root potential (fDR-VRP))[1] pA2: 4.96 (Kainate<-induced depolarisations of dorsal roots)[1]
In Vitro	UBP-282 (3-CBW) is selective for AMPA- and GluR5-containing kainate receptors vs NMDA, mGlu and kainate receptors expressed on motor neurones[1][2]. UBP-282 (3-CBW), at a concentration of 200 μM, blocks AMPA evoked depolarizations on motoneurones while responses to equi-effective doses of NMDA and DHPG were relatively unaffected. In the presence of 200 μM UBP-282, a concentration that completely abolishes AMPA-evoked depolarizations on motoneurones and kainate-evoked responses on dorsal root, there is still a noticeable depolarization evoked by kainate on motoneurones[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	On neonatal rat motoneurones UBP-282 (3-CBW) (200 μM) almost completely abolished responses to AMPA while responses to NMDA, kainate and DHPG were 101.6%, 39.4% and 110.5% of control, respectively. UBP-282 can therefore be used to isolate kainate receptor responses from those mediated by AMPA receptors[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Julia C A More, et al. The novel antagonist 3-CBW discriminates between kainate receptors expressed on neonatal rat motoneurones and those on dorsal root C-fibres. Br J Pharmacol. 2002 Dec;137(7):1125-33.

[2]. Julia C A More, et al. Structural requirements for novel willardiine derivatives acting as AMPA and kainate receptor antagonists. Br J Pharmacol. 2003 Mar;138(6):1093-100.

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

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