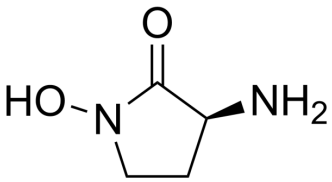
(S)-(-)-HA 966

Cat. No.:	HY-100822A
CAS No.:	111821-58-0
Molecular Formula:	$C_4H_8N_2O_2$
Molecular Weight:	116.12
Target:	iGluR
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	(S)-(-)-HA 966 ((-)-HA 966), a γ-Hydroxybutyrate-like agent, is weakly active as an NMDA-receptor antagonist. (S)-(-)-HA 966 possesses muscle relaxant action and prevents enhanced mesocorticolimbic dopamine metabolism and behavioral correlates of restraint stress, conditioned fear[1][2].
IC_{50} & Target	NMDA Receptor
In Vitro	On cultured cortical neurones (+)-HA-966 inhibits glycine-potentiated NMDA responses with an IC_{50}=13 μM compared with (-)-HA-966 (IC_{50}=708 μM)[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	(S)-(-)-HA 966 ((-)-HA 966; 3 and 5 mg/kg; i.p.) prevents restraint stress-induced dopamine utilization in both the medial prefrontal cortex and nucleus accumbens. (S)-(-)-HA 966 suppresses fear-induced behaviors: immobility and defecation[1]. (S)-(-)-HA 966 (3 mg/kg; i.p.) prevents locomotor sensitization without altering the acute motoric response elicited by cocaine[1]. (S)-(-)-HA 966 (5 mg/kg; i.p.) blocks acute cocaine-induced locomotion but resulted in sedation[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. B A Morrow, et al. (S)-(-)-HA-966, a gamma-hydroxybutyrate-like agent, prevents enhanced mesocorticolimbic dopamine metabolism and behavioral correlates of restraint stress, conditioned fear and cocaine sensitization. J Pharmacol Exp Ther. 1997 Nov;283(2):712-21.

[2]. L Singh, et al. Enantiomers of HA-966 (3-amino-1-hydroxypyrrolid-2-one) exhibit distinct central nervous system effects: (+)-HA-966 is a selective glycine/N-methyl-D-aspartate receptor antagonist, but (-)-HA-966 is a potent gamma-butyrolactone-like sedative. Proc Natl Acad Sci U S A. 1990 Jan;87(1):347-51.

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

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