Galantide

Cat. No.:	HY-P0262
CAS No.:	138579-66-5
Molecular Formula:	$C_{104}H_{151}N_{25}O_{26}S$
Molecular Weight:	2200
Sequence:	Gly-Trp-Thr-Leu-Asn-Ser-Ala-Gly-Tyr-Leu-Leu-Gly-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met-NH2
Sequence Shortening:	GWTLNSAGYLLGPQQFFGLM-NH2
Target:	Neuropeptide Y Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Sealed storage, away from moisture Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

BIOLOGICAL ACTIVITY

Description	Galantide, a non-specific galanin receptor antagonist, is a peptide consisting of fragments of galanin and substance P. Galantide recognizes two classes of galanin binding sites (K_D<0.1 nM and ~6 nM) in the rat hypothalamus. Galantide dose dependently (IC_{50}=1.0 nM) antagonizes the galanin-mediated inhibition of the glucose-induced insulin secretion from mouse pancreatic islets. Galantide appears to bind to a single population of SP receptors (K_D~40 nM)[1][2][3].
In Vitro	Galantide do not activate the K^+ conductance but produces a concentration-dependent antagonism (IC_{50}=4 nM) of the galanin-induced increase in K^+ conductance. Galantide acts like galanin and inhibits the voltage-dependent Ba2+ current (IBa). The inhibition of IBa also is concentration dependent (IC_{50}=16 nM) and the maximum inhibition produced by galantide is approximately 40%[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Intracerebroventricular injection of galanin (5 micrograms/rat) inhibited sexual behavior in experienced male rats--without producing any other locomotor or behavioral deficit-, injection of the galanin antagonist, galantide, by the same route (1 or 2 micrograms/rat) stimulated sexual behavior (improving arousal, motivation and performance indexes) and antagonized the effect of galanin[2]. Galantide ameliorates mild acute pancreatitis (AP). Galantide significantly reduces AP-induced hyperenzymemia by 41–49%[3]. Galantide has been found to improve social memory in 'socialrecognition' test when i.c.v. administered at doses varying from 6-6000 nM[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [3][4]	Rats: Galantide is dissolved in 0.9% NaCl. The i.c.v. injection is given to the resident rat immediately after removal of the juvenile, at the end of the first encounter. Control rats receive an equal volume (4 μL) of saline by the same route, at the same infusion rate (1 μL/20 s) and at the same time. A minimum of 10 adult rats are used for each dose level[4].

Mice: Galantide stock solution is prepared in 0.01% bovine serum albumin in saline. The mice are allocated to 7 groups: Mice administered the vehicle for injection (saline alone), mice administered only caerulein (AP alone), mice administered only galantide (GT alone) or feG (feG alone), mice administered caerulein and galantide (AP+GT) or caerulein and feG (AP+feG) and finally mice that are administered with caerulein, galantide and feG (AP+GT+feG). On the day prior to the AP induction, a blood sample is collected to measure the basal plasma amylase activity[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Langel U, et al. Design of chimeric peptide ligands to galanin receptors and substance P receptors. Int J Pept Protein Res. 1992;39(6):516-522.

[2]. Lindskog S, et al. The novel high-affinity antagonist, galantide, blocks the galanin-mediated inhibition of glucose-induced insulin secretion. Eur J Pharmacol. 1992;210(2):183-188.

[3]. Mulvaney JM, et al. Galantide distinguishes putative subtypes of galanin receptors in mudpuppy parasympathetic neurons. Eur J Pharmacol. 1995;287(1):97-100.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA