

## Galanin Receptor Ligand M35

<b>Cat. No.:</b>	HY-P1840		
<b>CAS No.:</b>	142846-71-7		
<b>Molecular Formula:</b>	$C_{107}H_{153}N_{27}O_{26}$		
<b>Molecular Weight:</b>	2233.6		
<b>Sequence:</b>	Gly-Trp-Thr-Leu-Asn-Ser-Ala-Gly-Tyr-Leu-Leu-Gly-Pro-Pro-Pro-Gly-Phe-Ser-Pro-Phe-Arg-NH <sub>2</sub> GWTLSAGYLLGPPPGFSPFR-NH <sub>2</sub>		
<b>Sequence Shortening:</b>	GWTLSAGYLLGPPPGFSPFR-NH <sub>2</sub>		
<b>Target:</b>	Neuropeptide Y Receptor		
<b>Pathway:</b>	GPCR/G Protein; Neuronal Signaling		
<b>Storage:</b>	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)		

### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 100 mg/mL (44.77 mM; Need ultrasonic)  
H<sub>2</sub>O : 50 mg/mL (22.39 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	0.4477 mL	2.2385 mL	4.4771 mL
	5 mM	0.0895 mL	0.4477 mL	0.8954 mL
	10 mM	0.0448 mL	0.2239 mL	0.4477 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (1.12 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (1.12 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (1.12 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Galanin Receptor Ligand M35 is a high-affinity ligand and antagonist of galanin receptor ( $K_d=0.1$  nM). Galanin Receptor Ligand M35 exerts a  $K_i$  values of 0.11 and 2.0 nM for human galanin receptor type 1 and 2, respectively<sup>[1][2]</sup>.

<b>IC<sub>50</sub> &amp; Target</b>	Kd: 0.1 nM (galanin receptor) <sup>[1]</sup> Ki: 0.11 nM (human galanin receptor type 1), 2.0 nM (human galanin receptor type 2) <sup>[2]</sup>
<b>In Vitro</b>	Galanin Receptor Ligand M35 has a dual effect on the galanin mediated inhibition of Forskolin stimulated cyclic AMP production in Rin m 5F cells. Co-applied with galanin (10 nM), Galanin Receptor Ligand M35 at low concentrations (1 nM) is able to reverse the inhibitory effect of galanin. But when present at higher concentrations (15 and 30 nM), Galanin Receptor Ligand M35 acts as a galanin receptor agonist, inhibiting the forskolin stimulated production of cAMP <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Galanin Receptor Ligand M35 (6 nM/10 µL; i.c.v.) improves the ability of the male Sprague-Dwley rats to acquire the swim maze task <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

- [1]. Kask K, et al. Binding and agonist/antagonist actions of M35, galanin(1-13)-bradykinin(2-9)amide chimeric peptide, in Rin m 5F insulinoma cells. Regul Pept. 1995 Nov 10;59(3):341-8.
- [2]. Webling KE, et al. Galanin receptors and ligands. Front Endocrinol (Lausanne). 2012 Dec 7;3:146.
- [3]. Ogren SO, et al. Evidence for a role of the neuropeptide galanin in spatial learning. Neuroscience. 1992 Nov;51(1):1-5.

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

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