

Pancreatic Polypeptide, human

Cat. No.:	HY-P0199
CAS No.:	75976-10-2
Molecular Formula:	C ₁₈₅ H ₂₈₇ N ₅₃ O ₅₄ S ₂
Molecular Weight:	4181.71
Sequence:	Ala-Pro-Leu-Glu-Pro-Val-Tyr-Pro-Gly-Asp-Asn-Ala-Thr-Pro-Glu-Gln-Met-Ala-Gln-Tyr-Ala-Ala-Asp-Leu-Arg-Arg-Tyr-Ile-Asn-Met-Leu-Thr-Arg-Pro-Arg-Tyr-NH ₂ APLEPVYPGDNATPEQMAQYAADLRRYINMLTRPRY-NH ₂
Sequence Shortening:	APLEPVYPGDNATPEQMAQYAADLRRYINMLTRPRY-NH ₂
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)

SOLVENT & SOLUBILITY

In Vitro	DMSO : 25 mg/mL (5.98 mM; Need ultrasonic)				
	Preparing Stock Solutions	<div>Solvent Concentration</div> <div>Mass</div>	1 mg	5 mg	10 mg
		1 mM	0.2391 mL	1.1957 mL	2.3914 mL
		5 mM	0.0478 mL	0.2391 mL	0.4783 mL
		10 mM	---	---	---
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (0.60 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (0.60 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Pancreatic Polypeptide, human is a C-terminally amidated 36 amino acid peptide, which acts as a neuropeptide Y (NPY) Y4/Y5 receptor agonist.
IC ₅₀ & Target	Neuropeptide Y (NPY) Y4/Y5 receptor ^[1]
In Vitro	Human pancreatic polypeptide (hPP) is one such peptide, being released postprandially from F cells of the pancreatic islets

depending on caloric load, food consumption and circadian rhythm. It is a C-terminally amidated 36 amino acid peptide with a characteristic hairpin-like pancreatic polypeptide (PP)-fold and acts at the Y4 receptor to induce satiety and delay gastric emptying and motility^[1]. Addition of the human pancreatic polypeptide (hPP) (10 nM-1 μ M) results in a significant, dose-dependent reduction in both basal and stimulated release. Human pancreatic polypeptide (hPP) can also inhibit basal and stimulated NPY release with a pharmacological profile suggesting a role for Y4 presynaptic receptors^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Thieme V, et al. High molecular weight PEGylation of human pancreatic polypeptide at position 22 improves stability and reduces food intake in mice. *Br J Pharmacol.* 2016 Nov;173(22):3208-3221.
- [2]. King PJ, et al. Regulation of neuropeptide Y release by neuropeptide Y receptor ligands and calcium channel antagonists in hypothalamic slices. *J Neurochem.* 1999 Aug;73(2):641-6.
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Caution: Product has not been fully validated for medical applications. For research use only.

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