

# PRODUCT INFORMATION



## Pancreatic Polypeptide (human) (trifluoroacetate salt)

Item No. 24555

**Formal Name:** L-alanyl-L-prolyl-L-leucyl-L- $\alpha$ -glutamyl-L-prolyl-L-valyl-L-tyrosyl-L-prolylglycyl-L- $\alpha$ -aspartyl-L-asparaginyl-L-alanyl-L-threonyl-L-prolyl-L- $\alpha$ -glutamyl-L-glutamyl-L-methionyl-L-alanyl-L-glutamyl-L-tyrosyl-L-alanyl-L-alanyl-L- $\alpha$ -aspartyl-L-leucyl-L-arginyl-L-arginyl-L-tyrosyl-L-isoleucyl-L-asparaginyl-L-methionyl-L-leucyl-L-threonyl-L-arginyl-L-prolyl-L-arginyl-L-tyrosinamide, trifluoroacetate salt

**MF:**  $C_{185}H_{287}N_{53}O_{54}S_2 \cdot XCF_3COOH$

**FW:** 4,181.8

**Purity:**  $\geq 95\%$

**Supplied as:** A lyophilized powder

**Storage:**  $-20^\circ C$

**Stability:**  $\geq 4$  years

—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<sub>2</sub>  
• XCF<sub>3</sub>COOH

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Pancreatic polypeptide (human) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the pancreatic polypeptide (human) (trifluoroacetate salt) in water. The solubility of pancreatic polypeptide (human) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Pancreatic polypeptide is an agonist of neuropeptide Y (NPY) receptors that reduces forskolin-induced cAMP accumulation in L-M(TK-) cells recombinantly expressing human and rat Y<sub>4</sub> receptors (EC<sub>50</sub>s = 87.1 and 36.3 pM, respectively).<sup>1</sup> It binds to Y<sub>1</sub> and Y<sub>5</sub> receptors with K<sub>i</sub> values of 19 and 3.9 nM, respectively, for human and 50 and 2.4 nM, respectively, for rhesus monkey receptors.<sup>2</sup> Pancreatic polypeptide also binds to rabbit Y<sub>1</sub>, Y<sub>2</sub>, Y<sub>4</sub>, and Y<sub>5</sub> receptors (K<sub>i</sub>s = 0.39, 0.087, 0.79, and 0.24 nM, respectively).<sup>3</sup> It induces contractile responses in isolated rat colon with EC<sub>50</sub> values of 1.6 and 0.7 nM for ascending and descending colon segments, respectively.<sup>4</sup> *In vivo*, pancreatic polypeptide (0.7-7 nmol, i.c.v.) increases food intake in rats.<sup>5</sup>

### References

1. Walker, M.W., Smith, K.E., Bard, J., et al. A structure-activity analysis of the cloned rat and human Y<sub>4</sub> receptors for pancreatic polypeptide. *Peptides* **18**(4), 609-612 (1997).
2. Gehlert, D.R., Yang, P., George, C., et al. Cloning and characterization of Rhesus monkey neuropeptide Y receptor subtypes. *Peptides* **22**(3), 343-350 (2001).
3. Umeda, T., Kanatani, A., and Iwaasa, H. Cloning and characterization of rabbit neuropeptide Y receptor subtypes. *Peptides* **30**(8), 1441-1447 (2009).
4. Pheng, L.-H., Perron, A., Quirion, R., et al. Neuropeptide Y-induced contraction is mediated by neuropeptide YY<sub>2</sub> and Y<sub>4</sub> receptors in the rat colon. *Eur. J. Pharmacol.* **374**(1), 85-91 (1999).
5. Haynes, A.C., Arch, J.R.S., Wilson, S., et al. Characterisation of the neuropeptide Y receptor that mediates feeding in the rat: A role for the Y<sub>5</sub> receptor? *Regul. Pept.* **75-76**, 355-361 (1998).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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