

# PRODUCT INFORMATION

[cPP<sup>1-7</sup>,NPY<sup>19-23</sup>,Ala<sup>31</sup>,Aib<sup>32</sup>,Gln<sup>34</sup>] - Pancreatic Polypeptide (human) (acetate)  
Item No. 36718

**Formal Name:** glycyl-L-prolyl-L-seryl-L-glutamyl-L-prolyl-L-threonyl-L-tyrosyl-L-prolylglycyl-L- $\alpha$ -aspartyl-L-asparaginyll-L-alanyl-L-threonyl-L-prolyl-L- $\alpha$ -glutamyl-L-glutamyl-L-methionyl-L-alanyl-L-arginyl-L-tyrosyl-L-tyrosyl-L-seryl-L-alanyl-L-leucyl-L-arginyl-L-arginyl-L-tyrosyl-L-isoleucyl-L-asparaginyll-L-methionyl-L-alanyl-2-methylalanyl-L-arginyl-L-glutamyl-L-arginyl-L-tyrosinamide, acetate

H—Gly—Pro—Ser—Gln—Pro—Thr—Tyr—Pro—Gly—Asp—  
Asn—Ala—Thr—Pro—Glu—Gln—Met—Ala—Arg—Tyr—  
Tyr—Ser—Ala—Leu—Arg—Arg—Tyr—Ile—Asn—Met—  
Ala—Aib—Arg—Gln—Arg—Tyr—NH<sub>2</sub>

**Peptide Sequence:** GPSQPTYPGDNATPEQMARYYSALRRYINMA  
XRQRY-NH<sub>2</sub> (X = 2-Aminoisobutyric acid)

**MF:** C<sub>183</sub>H<sub>281</sub>N<sub>57</sub>O<sub>54</sub>S<sub>2</sub> • XC<sub>2</sub>H<sub>4</sub>O<sub>2</sub>

• XCH<sub>3</sub>CO<sub>2</sub>H

**FW:** 4,207.7

**Purity:** ≥98%

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥4 years

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

## Laboratory Procedures

[cPP<sup>1-7</sup>,NPY<sup>19-23</sup>,Ala<sup>31</sup>,Aib<sup>32</sup>,Gln<sup>34</sup>] - Pancreatic Polypeptide (human) (acetate) is supplied as a crystalline solid. A stock solution may be made by dissolving the [cPP<sup>1-7</sup>,NPY<sup>19-23</sup>,Ala<sup>31</sup>,Aib<sup>32</sup>,Gln<sup>34</sup>] - pancreatic polypeptide (human) (acetate) in water. We do not recommend storing the aqueous solution for more than one day.

## Description

[cPP<sup>1-7</sup>,NPY<sup>19-23</sup>,Ala<sup>31</sup>,Aib<sup>32</sup>,Gln<sup>34</sup>] - Pancreatic polypeptide is an agonist of the neuropeptide Y (NPY) receptor Y<sub>5</sub>.<sup>1</sup> It inhibits cAMP production induced by forskolin (Item No. 11018) in HEK293 cells expressing the human Y<sub>5</sub> receptor (EC<sub>50</sub> = 17 nM). [cPP<sup>1-7</sup>,NPY<sup>19-23</sup>,Ala<sup>31</sup>,Aib<sup>32</sup>,Gln<sup>34</sup>] - Pancreatic polypeptide selectively binds to Y<sub>5</sub> (IC<sub>50</sub> = 0.24 nM in HEK293 cells expressing the human receptor) over Y<sub>1</sub>, Y<sub>2</sub>, and Y<sub>4</sub> (IC<sub>50</sub>s = 530, >500, and 51 nM, respectively, in BHK-21 cells expressing the human receptors). *In vitro*, [cPP<sup>1-7</sup>,NPY<sup>19-23</sup>,Ala<sup>31</sup>,Aib<sup>32</sup>,Gln<sup>34</sup>] - pancreatic polypeptide increases VEGF levels, as well as endothelial branch length and the number of branch points, in 4T1 murine mammary carcinoma cells in a concentration-dependent manner.<sup>2</sup> It induces relaxation of vasopressin-precontracted rat mesenteric arteries when used at a concentration of 1  $\mu$ M.<sup>3</sup> Intracranial administration of [cPP<sup>1-7</sup>,NPY<sup>19-23</sup>,Ala<sup>31</sup>,Aib<sup>32</sup>,Gln<sup>34</sup>] - pancreatic polypeptide (0.2 and 2 nmol/animal) increases food intake in rats.<sup>1</sup>

## References

1. Cabrele, C., Langer, M., Bader, R., *et al.* The first selective agonist for the neuropeptide YY<sub>5</sub> receptor increases food intake in rats. *J. Biol. Chem.* **275(46)**, 36043-36048 (2000).
2. Medeiros, P.J. and Jackson, D.N. Neuropeptide Y Y<sub>5</sub>-receptor activation on breast cancer cells acts as a paracrine system that stimulates VEGF expression and secretion to promote angiogenesis. *Peptides* **48**, 106-113 (2013).
3. Gradin, K.A., Li, J.-Y., Zhu, H., *et al.* Blunted pancreatic polypeptide-induced vasodilatation in mesenteric resistance vessels from spontaneously hypertensive rats. *Eur. J. Pharmacol.* **601(1-3)**, 118-123 (2008).

### 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.

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