

# PRODUCT INFORMATION



## [Leu<sup>31</sup>,Pro<sup>34</sup>] Neuropeptide Y (human) (trifluoroacetate salt)

Item No. 24712

<b>Formal Name:</b>	31-L-leucine-34-L-proline-neuropeptide Y (human), trifluoroacetate salt	H-Tyr-Pro-Ser-Lys-Pro-Asp-Asn-Pro-Gly-Glu-Asp-Ala-Pro-Ala-Glu-Asp-Met-Ala-Arg-Tyr-Tyr-Ser-Ala-Leu-Arg-His-Tyr-Ile-Asn-Leu-Leu-Thr-Arg-Pro-Arg-Tyr-NH <sub>2</sub>
<b>Synonym:</b>	[Leu <sup>31</sup> ,Pro <sup>34</sup> ] NPY	
<b>MF:</b>	C <sub>189</sub> H <sub>284</sub> N <sub>54</sub> O <sub>56</sub> S • XCF <sub>3</sub> COOH	
<b>FW:</b>	4,240.7	
<b>Purity:</b>	≥95%	
<b>Supplied as:</b>	A lyophilized powder	
<b>Storage:</b>	-20°C	
<b>Stability:</b>	≥4 years	

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

### Laboratory Procedures

[Leu<sup>31</sup>,Pro<sup>34</sup>] Neuropeptide Y (NPY) (human) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the [Leu<sup>31</sup>,Pro<sup>34</sup>] NPY (human) (trifluoroacetate salt) in water. The solubility of [Leu<sup>31</sup>,Pro<sup>34</sup>] NPY (human) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

[Leu<sup>31</sup>,Pro<sup>34</sup>] NPY is an agonist of the NPY receptors Y<sub>1</sub> and Y<sub>5</sub> with K<sub>i</sub> values of 0.11 and 0.17 nM, respectively, for human and 0.08 and 0.18 nM, respectively, for rhesus monkey receptors.<sup>1</sup> It reduces forskolin-induced cAMP accumulation in L-M(TK-) cells expressing human and rat Y<sub>4</sub> receptors (EC<sub>50</sub>s = 29.5 and 2.95 nM, respectively).<sup>2</sup> It also binds to rhesus monkey Y<sub>2</sub> and mouse Y<sub>6</sub> receptors (K<sub>s</sub> = 410 and 9.7 nM, respectively).<sup>1,3</sup> *In vitro*, [Leu<sup>31</sup>,Pro<sup>34</sup>] NPY increases cellular protein mass by 25% in rat ventricular cardiomyocytes when used at a concentration of 10 nM.<sup>4</sup> *In vivo*, [Leu<sup>31</sup>,Pro<sup>34</sup>] NPY (0.7-7 nmol, i.c.v.) increases food intake in rats.<sup>5</sup>

### References

1. 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).
2. 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).
3. Mullins, D.E., Guzzi, M., Xia, L., *et al.* Pharmacological characterization of the cloned neuropeptide Y<sub>6</sub> receptor. *Eur. J. Pharmacol.* **395**(2), 87-93 (2000).
4. Nicholl, S.M., Bell, D., Spiers, J.P., *et al.* Neuropeptide Y Y<sub>1</sub> receptor regulates protein turnover and constitutive gene expression in hypertrophying cardiomyocytes. *Eur. J. Pharmacol.* **441**(1-2), 23-34 (2002).
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.

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