

## Osteostatin (human)

Cat. No.:	HY-P4800
CAS No.:	137348-10-8
Molecular Formula:	C <sub>142</sub> H <sub>228</sub> N <sub>42</sub> O <sub>58</sub>
Molecular Weight:	3451.58
Sequence:	Thr-Arg-Ser-Ala-Trp-Leu-Asp-Ser-Gly-Val-Thr-Gly-Ser-Gly-Leu-Glu-Gly-Asp-His-Leu-Ser-Asp-Thr-Ser-Thr-Thr-Ser-Leu-Glu-Leu-Asp-Ser-Arg
Sequence Shortening:	TRSAWLDSGVTGSGLEGDHLSDTSTTSLELDSR
Target:	Thyroid Hormone Receptor
Pathway:	Vitamin D Related/Nuclear Receptor
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	Osteostatin (human), a fragment of parathyroid hormone-related protein (PTHrP) 107-139, promotes bone repair in animal models of bone defects and prevents bone erosion in inflammatory arthritis <sup>[1]</sup> .
<b>In Vitro</b>	Osteostatin (100, 250 and 500 nM) decreases the differentiation of osteoclasts in a concentration-dependent manner, but it does not modify the resorptive ability of mature osteoclasts. In addition, Osteostatin decreases the mRNA levels of cathepsin K, osteoclast associated Ig-like receptor (OSCAR) and NFATc1 <sup>[1]</sup> . Osteostatin (human) potentiates the bioactivity of mesoporous glass scaffolds containing Zn <sup>2+</sup> ions in human mesenchymal stem cell cultures <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

[1]. Lidia Ibáñez, et al. Osteostatin Inhibits M-CSF+RANKL-Induced Human Osteoclast Differentiation by Modulating NFATc1. *Int J Mol Sci.* 2022 Aug 1;23(15):8551.

[2]. C Heras, et al. Osteostatin potentiates the bioactivity of mesoporous glass scaffolds containing Zn<sup>2+</sup> ions in human mesenchymal stem cells. *Acta Biomater.* 2019 Apr 15;89:359-371.

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

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