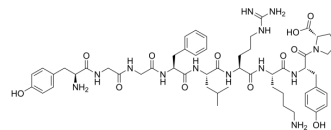


β-Neo-Endorphin

Cat. No.: HY-P3513
CAS No.: 77739-21-0
Molecular Formula: C₅₄H₇₇N₁₃O₁₂
Molecular Weight: 1100.27
Sequence Shortening: YGGFLRKYP
Target: ERK; MMP
Pathway: MAPK/ERK Pathway; Stem Cell/Wnt; Metabolic Enzyme/Protease
Storage: Sealed storage, away from moisture and light, under nitrogen



Powder -80°C 2 years
 -20°C 1 year

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen)

SOLVENT & SOLUBILITY

In Vitro

H₂O : 100 mg/mL (90.89 mM; Need ultrasonic)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		0.9089 mL	4.5443 mL	9.0887 mL
	5 mM		0.1818 mL	0.9089 mL	1.8177 mL
	10 mM		0.0909 mL	0.4544 mL	0.9089 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

β-Neo-Endorphin is an endogenous opioid peptide. β-Neo-Endorphin is a hypothalamic “big” Leu-enkephalin of porcine origin. β-Neo-Endorphin shows activation of the Erk1/2, MMP-2 and MMP-9^{[1][2]}.

IC₅₀ & Target

ERK1 ERK2 MMP-2 MMP-9

In Vitro

β-Neo-Endorphin (0-20 μM, 20 h) stimulates wound healing in human keratinocytes^[2].
 β-Neo-Endorphin (promotes wound healing through activation of the Erk1/2 signaling pathway in human keratinocytes^[2].
 β-Neo-Endorphin (0-20 μM, 12 h) stimulates keratinocyte migration through activation of metalloproteinase (MMP)-2 and -9^[2].
 β-Neo-Endorphin (12 h) stimulates migration in the fibroblast^[2].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.
 Cell Viability Assay^[2]

Cell Line:	Human keratinocytes (HaCaT)
Concentration:	0, 5, 10 and 20 μ M
Incubation Time:	20 h
Result:	Significantly increased the wound closure. Had no observable effect on cell viability.

Western Blot Analysis^[2]

Cell Line:	Human keratinocytes (HaCaT)
Concentration:	0, 5, 10 and 20 μ M
Incubation Time:	12 h
Result:	Activated Erk1/2, phosphorylated P90RSK and Elk-1, showed significant upregulation of MMP-2 and -9 expression.

REFERENCES

- [1]. Minamino N, et al. Beta-neo-endorphin, a new hypothalamic "big" Leu-enkephalin of porcine origin: its purification and the complete amino acid sequence. *Biochem Biophys Res Commun.* 1981 Apr 15;99(3):864-70.
- [2]. Yang DJ, et al. β -Neoendorphin Enhances Wound Healing by Promoting Cell Migration in Keratinocyte. *Molecules.* 2020 Oct 12;25(20):4640.

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

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