

PRODUCT INFORMATION



FNIII14 (sodium salt)

Item No. 41396

Formal Name: L-threonyl-L- α -glutamyl-L-alanyl-L-threonyl-L-isoleucyl-L-threonylglycyl-L-leucyl-L- α -glutamyl-L-prolylglycyl-L-threonyl-L- α -glutamyl-L-tyrosyl-L-threonyl-L-isoleucyl-L-tyrosyl-L-valyl-L-isoleucyl-L-alanyl-L-leucine, sodium salt

Synonym: FNIII14-2

Peptide Sequence: TEATITGLEPGTWYTIYVIAL-OH

MF: C₁₀₃H₁₆₃N₂₁O₃₅ • XNa

FW: 2,255.5

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

H – Thr – Glu – Ala – Thr – Ile – Thr – Gly – Leu – Glu – Pro – Gly – Thr – Glu – Tyr – Thr – Ile – Tyr – Val – Ile – Ala – Leu – OH

• XNa

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

Laboratory Procedures

FNIII14 (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the FNIII14 (sodium salt) in the solvent of choice, which should be purged with an inert gas. FNIII14 (sodium salt) is soluble (≥10 mg/ml) in DMSO.

Description

FNIII14 is an inhibitor of cell adhesion and a peptide derived from the 14th type III repeat, which is part of heparin-binding domain 2, of human, mouse, and rat fibronectin.^{1,2} It inhibits the adhesion of A375-SM melanoma cells to fibronectin-coated plates when used at a concentration of 200 μ g/ml.¹ FNIII14 (100 μ g/ml) inhibits the binding of an antibody targeting the active conformation of the fibronectin receptor β 1 integrin on K562 cells, which endogenously express integrin α 5 β 1 as its only β 1 integrin, and induces the differentiation of ST 13 fibroblasts into adipocytes.² It decreases atherosclerotic plaque formation in *Ldlr*^{-/-} mice fed a Western diet.³ FNIII14, in combination with the antitumor antibiotic doxorubicin (Item No. 15007), reduces metastatic tumor burden in a 4T1 murine mammary model of metastasis.⁴

References

1. Fukai, F., Hasabe, S., Ueki, M., *et al.* Identification of the anti-adhesive site buried within the heparin-binding domain of fibronectin. *J. Biochem.* **121(2)**, 189-192 (1997).
2. Kamiya, S., Kato, R., Wakabayashi, M., *et al.* Fibronectin peptides derived from two distinct regions stimulate adipocyte differentiation by preventing fibronectin matrix assembly. *Biochemistry* **41(9)**, 3270-3277 (2002).
3. Iyoda, T., Ohishi, A., Wang, Y., *et al.* Bioactive TNIIIA2 sequence in tenascin-C is responsible for macrophage foam cell transformation; Potential of FNIII14 peptide derived from fibronectin in suppression of atherosclerotic plaque formation. *Int. J. Mol. Sci.* **25(3)**, 1825 (2024).
4. Iyoda, T., Nagamine, Y., Nakane, Y., *et al.* Coadministration of the FNIII14 peptide synergistically augments the anti-cancer activity of chemotherapeutic drugs by activating pro-apoptotic bim. *PLoS One* **11(9)**, e0162525 (2016).

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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