

PRODUCT INFORMATION



JB-1 (trifluoroacetate salt)

Item No. 44046

Formal Name: L-cysteinyl-L-tyrosyl-L-alanyl-L-alanyl-L-prolyl-L-leucyl-L-lysyl-L-prolyl-L-alanyl-L-lysyl-L-seryl-L-cysteine, cyclic (1→12)-disulfide, trifluoroacetate salt
Synonyms: Cyclic [CYAAPLKPAKSC], cyclo(CYAAPLKPAKSC), IGF-1 Analog

Peptide Sequence: c(CYAAPLKPAKSC)

MF: C₅₅H₈₈N₁₄O₁₅S₂ • XCF₃COOH

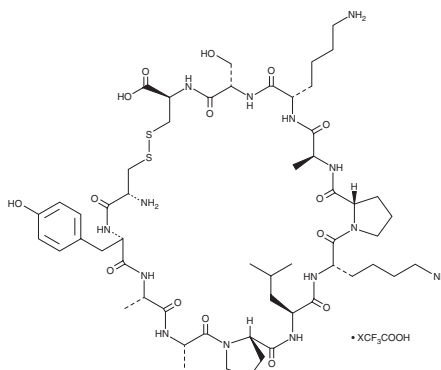
FW: 1,249.5

Purity: ≥95%

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

JB-1 (trifluoroacetate salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the JB-1 (trifluoroacetate salt) in water. JB-1 (trifluoroacetate salt) is slightly soluble (0.1-1 mg/ml) in water. We do not recommend storing the aqueous solution for more than one day.

Description

JB-1 is an insulin-like growth factor 1 receptor (IGF-1R) antagonist and a cyclic derivative of IGF-1 (60-70).¹ It inhibits IGF-1-induced IGF-1R autophosphorylation and proliferation in BALB/c 3T3 cells overexpressing IGF-1R when used at a concentration of 1 µg/ml. Intracerebroventricular administration of JB-1 (4 µg/animal) reduces estradiol- and progesterone-induced increases in serum luteinizing hormone (LH) levels in ovariectomized rats.² It also decreases lordosis behavior in the same rats. JB-1 inhibits oxygen-induced decreases in body weight and increases in retinal vascular overgrowth in a neonatal rat model of oxygen-induced retinopathy.³

References

1. Pietrzowski, Z., Wernicke, D., Porcu, P., *et al.* Inhibition of cellular proliferation by peptide analogues of insulin-like growth factor 1. *Cancer Res.* **52(23)**, 6447-6451 (1992).
2. Quesada, A. and Etgen, A.M. Functional interactions between estrogen and insulin-like growth factor-I in the regulation of α_{1B} -adrenoceptors and female reproductive function. *J. Neurosci.* **22(6)**, 2401-2408 (2002).
3. Brock, R.S., Gebrekristos, B.H., Kuniyoshi, K.M., *et al.* Biomolecular effects of Jb1 (an IGF-I peptide analog) in a rat model of oxygen-induced retinopathy. *Pediatr. Res.* **69(2)**, 135-141 (2011).

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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