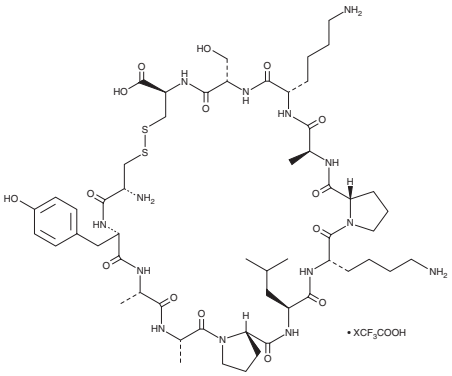
PRODUCT INFORMATION

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:	$C_{55}H_{88}N_{14}O_{15}S_2 \bullet XCF_3COOH$
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 ovariohysterectomized 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. Pietrzkowski, 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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM