

PRODUCT INFORMATION



Kisspeptin-54 (human) (trifluoroacetate salt)

Item No. 24477

Formal Name:	G protein-coupled receptor GPR54 (human), trifluoroacetate salt	H—Gly—Thr—Ser—Leu—Ser—Pro—Pro—Pro—Glu—Ser— Ser—Gly—Ser—Arg—Gln—Gln—Pro—Gly—Leu—Ser— Ala—Pro—His—Ser—Arg—Gln—Ile—Pro—Ala—Pro— Gln—Gly—Ala—Val—Leu—Val—Gln—Arg—Glu—Lys— Asp—Leu—Pro—Asn—Tyr—Asn—Trp—Asn—Ser—Phe— Gly—Leu—Arg—Phe—NH ₂ • XCF ₃ COOH
Synonyms:	Kp-54, Metastin	
MF:	C ₂₅₈ H ₄₀₁ N ₇₉ O ₇₈ • XCF ₃ COOH	
FW:	5,857.5	
Purity:	≥95%	
Supplied as:	A lyophilized powder	
Storage:	-20°C	
Stability:	≥4 years	

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

Laboratory Procedures

Kisspeptin-54 (human) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the kisspeptin-54 (human) (trifluoroacetate salt) in water. The solubility of kisspeptin-54 (human) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Kisspeptin-54 is a peptide ligand of the orphan G protein-coupled receptor GPR54 ($K_{1/2}$ = 1.81 and 1.45 nM for rat and human receptors, respectively).¹ It is a 54 amino acid peptide encoded by the metastasis suppressor gene KISS-1. Kisspeptin-54 induces calcium mobilization in CHO-K1 cells expressing rat and human receptors (EC_{50} = 1.39 and 5.47 nM, respectively). It also induces arachidonic acid release in CHO cells expressing rat and human GPR54 in a concentration-dependent manner. Kisspeptin-54 (10-1,000 nM) inhibits insulin secretion from isolated mouse pancreatic β -cells in the presence of 2.8 mM, but not 11.1 mM, glucose.² Kisspeptin-54 (1-5 nmol, i.c.v.) increases serum levels of luteinizing hormone (LH) and follicular stimulating hormone (FSH) in mice, an effect which is reversed by the gonadotropin releasing hormone (GNRH) antagonist acycline.³

References

1. Kotani, M., Detheux, M., Vandenbogaerde, A.L., *et al.* The metastasis suppressor gene KiSS-1 encodes kisspeptins, the natural ligands of the orphan G protein-coupled receptor GPR54. *J. Biol. Chem.* **276**(37), 34631-34636 (2001).
2. Vikman, J. and Ahrén, B. Inhibitory effect of kisspeptins on insulin secretion from isolated mouse islets. *Diabetes Obes. Metab.* **11**(Suppl 4), 197-201 (2009).
3. Gottsch, M.L., Cunningham, M.J., Smith, J.T., *et al.* A role for kisspeptins in the regulation of gonadotropin secretion in the mouse. *Endocrinology* **145**(9), 4073-4077 (2004).

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.

WARRANTY AND LIMITATION OF REMEDY

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