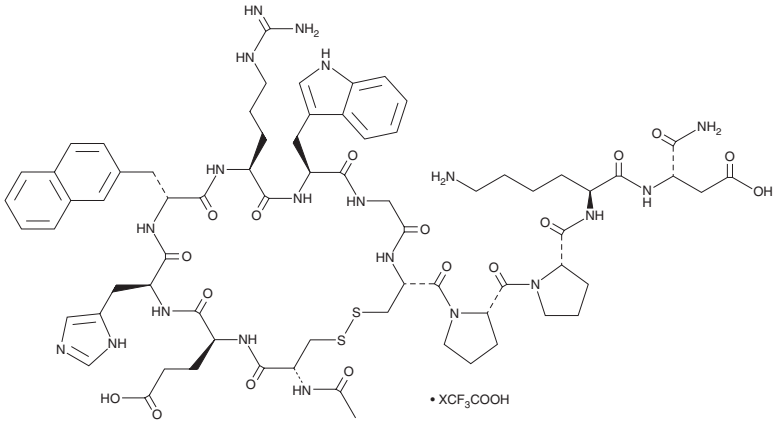
PRODUCT INFORMATION

HS-014 (trifluoroacetate salt)

Item No. 41556

Formal Name:	cyclic (1→8)-disulfide N-acetyl-L-cysteinyl-L-α-glutamyl-L-histidyl-3-(2-naphthalenyl)-D-alanyl-L-arginyl-L-tryptophylglycyl-L-cysteinyl-L-prolyl-L-prolyl-L-lysyl-L-α-asparagine, trifluoroacetate salt
Synonym:	Cyclic [Ac-Cys^{11}, D-Nal^{14}, Cys^{18}, Asp-NH_2]-β-MSH(11-22)
Peptide Sequence:	Ac-CEHXRWGCPPKD-NH_2 (X = 3-(2-naphthyl)-alanine)
MF:	$C_{71}H_{94}N_{20}O_{17}S_2 \bullet XCF_3COOH$
FW:	1,563.8
Purity:	≥98%
Supplied as:	A 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

HS-014 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the HS-014 (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. HS-014 (trifluoroacetate salt) is soluble (≥10 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of HS-014 (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. HS-014 (trifluoroacetate salt) is soluble (≥10 mg/ml) in PBS (pH 7.2) We do not recommend storing the aqueous solution for more than one day.

Description

HS-014 is an antagonist of melanocortin receptor 4 (MC4R; K_i = 3.16 nM).[1] It is selective for MC4R over MC1R, MC3R, and MC5R (K_is = 108, 54.4, and 694 nM, respectively). HS-014 inhibits cAMP accumulation induced by α-melanocyte-stimulating hormone (α-MSH) in COS-1 cells expressing MC4R in a concentration-dependent manner. It increases food intake in free-feeding rats when administered intracerebroventricularly at doses of 1 or 3 nmol/animal.[2] Intracerebroventricular administration of HS-014 (0.008 ng/animal) increases the latency to tail withdrawal in the tail-flick test, as well as inhibits morphine withdrawal-induced decreases in the latency to tail withdrawal in the tail-flick test, in rats.[3] It reduces immobility time in the forced swim test, as well as increases time in the open area and reduces the number of droppings in an open field test, in rats when administered at a dose of 100 µg/animal.[4]

References

1. Schiöth, H.B., Mutulis, F., Muceniece, R., *et al. Br. J. Pharmacol.* **124(1)**, 75-82 (1998).
2. Kask, A., Rägo, L., Mutulis, F., *et al. Biochem. Biophys. Res. Commun.* **245(1)**, 90-93 (1998).
3. Kalange, A.S., Kokare, D.M., Singru, P.S., *et al. Brain Res.* **1181**, 10-20 (2007).
4. Serova, L.I., Laukova, M., Alaluf, L.G., *et al. Behav. Brain Res.* **250**, 139-147 (2013).

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