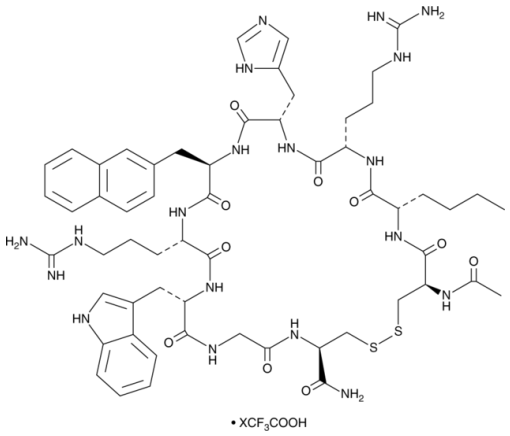
Product Data Sheet

Product Name: HS-024 (trifluoroacetate salt)
Cat. No.: GC92098

Chemical Properties

Cas. No.			
Chemical Name	cyclic (1→9)-disulfide, N-acetyl-L-cysteinyl-L-norleucyl-L-arginyl-L-histidyl-3-(2-naphthalenyl)-D-alanyl-L-tryptophylglycyl-L-cysteinamide, trifluoroacetate salt		
SMILES	O=C([C@@H](NC([C@H](NC([C@@H](NC([C@@H](NC([C@@H](NC([C@H](CSSC[C@H](NC(CNC1=O)=O)C(N)=O)NC(C)=O)=O)CCCC)=O)CCCNC(N)=N)=O)CC2=CN=CN2)=O)CC3=CC4=C(C=CC=C4)C=C3)=O)CCCNC(N)=N)N[C@H]1CC5=CNC6=CC=CC=C56.O=C(O)C(F)(F)F		
Formula	$C_{58}H_{79}N_{19}O_{10}S_2$? XCF_3COOH	M.Wt	1266.5
Solubility	DMSO: Soluble: ≥10 mg/m,Ethanol: Soluble: ≥10 mg/ml,PBS (pH 7.2): Soluble: ≥10 mg/ml	Storage	-20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

Product Data Sheet

HS-024 is a cyclic peptide antagonist of melanocortin receptor 4 (MC4R; K_i = 0.29 nM).[1] It is selective for MC4R over MC1R, MC3R, and MC5R (K_is = 18.6, 5.45, and 3.29 nM, respectively). HS-024 (100 nM) inhibits cAMP accumulation induced by α-melanocyte-stimulating hormone (α-MSH) in COS-1 cells expressing human MC1R, MC3R, MC4R, or MC5R. It increases food intake in rats when administered at doses of 0.3, 1, or 3 nmol/animal. Intrathecal administration of HS-024 (1.5 nmol/animal) inhibits mechanical allodynia at 30 minutes post-injection in a rat model of spinal nerve ligation-induced neuropathic pain.[2] It reduces stress-induced reinstatement of nicotine seeking in the foot shock test in rats.[3]

References:

[1]. Kask, A., Mutulis, F., Muceniece, R., et al.Discovery of a novel superpotent and selective melanocortin-4 receptor antagonist (HS024): Evaluation in vitro and in vivoEndocrinology139(12)5006-5014(1998).
[2]. Bertorelli, R., Fredduzzi, S., Tarozzo, G., et al.Endogenous and exogenous melanocortin antagonists induce anti-allodynic effects in a model of rat neuropathic painBehav. Brain Res.157(1)55-62(2005).
[3]. Qi, X., Yamada, H., Corrie, L.W., et al.A critical role for the melanocortin 4 receptor in stress-induced relapse to nicotine seeking in ratsAddict. Biol.20(2)324-335(2015).

Caution: Product has not been fully validated for medical applications. For research use only.
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