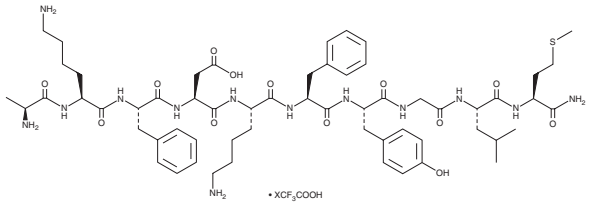
PRODUCT INFORMATION

Scyliorhinin I (dogfish) (trifluoroacetate salt)

Item No. 43081

Formal Name:	L-alanyl-L-lysyl-L-phenylalanyl-L-α-aspartyl-L-lysyl-L-phenylalanyl-L-tyrosylglycyl-L-leucyl-L-methioninamide, trifluoroacetate salt
Synonym:	Ala-Lys-Phe-Asp-Lys-Phe-Tyr-Gly-Leu-Met-NH_2
Peptide Sequence:	AKFDKFYGLM-NH_2
MF:	$C_{59}H_{87}N_{13}O_{13}S \bullet XCF_3COOH$
FW:	1,218.5
Purity:	≥95%
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

Scyliorhinin I (dogfish) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the scyliorhinin I (dogfish) (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Scyliorhinin I (dogfish) (trifluoroacetate salt) is slightly soluble (0.1-1 mg/ml) in ethanol and 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 scyliorhinin I (dogfish) (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. Scyliorhinin I (dogfish) (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

Scyliorhinin I is a neurokinin-1 (NK_1) and NK_2 receptor peptide agonist that has been found in dogfish intestines.[1,2] It binds to membrane preparations of rat submandibular gland and hamster urinary bladder (K_is = 0.9 and 2 nM, respectively), tissues that endogenously express high levels of NK_1 and NK_2 receptors, respectively. It increases intracellular levels of inositol-1,4,5-trisphosphate (IP_3) in KNRK rat kidney cells expressing the NK_1 receptor when used at a concentration of 1 µM.[2] Scyliorhinin I induces contractions in isolated and perfused carp intestinal bulb smooth muscle strips (EC_{50} = 15 nM).[3] Intrathecal or intracerebroventricular administration of scyliorhinin I induces reciprocal hindlimb neck-scratching behavior in mice (ED_{50}s = 0.07 and 0.05 nmol/animal, respectively).[4]

References

1. Buck, S.H. and Krstenansky, J.L. The dogfish peptides scyliorhinin I and scyliorhinin II bind with differential selectivity to mammalian tachykinin receptors. *Eur. J. Pharmacol.* **144(1)**, 109-111 (1987).
2. Vigna, S.R. The role of the amino-terminal domain of tachykinins in neurokinin-1 receptor signaling and desensitization. *Neuropeptides* **37(1)**, 30-35 (2003).
3. Kitazawa, T. Excitatory responses to scyliorhinins I and II in smooth muscle strips isolated from the carp intestinal bulb (*Cyprinus carpio*). *Naunyn Schmiedebergs Arch Pharmacol.* **343(5)**, 525-531 (1991).
4. Raffa, R.B., Martinez, R.P., and Connelly, C.D. Scyliorhinin-I and -II induce reciprocal hindlimb scratching in mice: Differentiation of spinal and supraspinal neurokinin receptors in vivo. *Neurosci. Lett.* **158(1)**, 87-91 (1993).

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