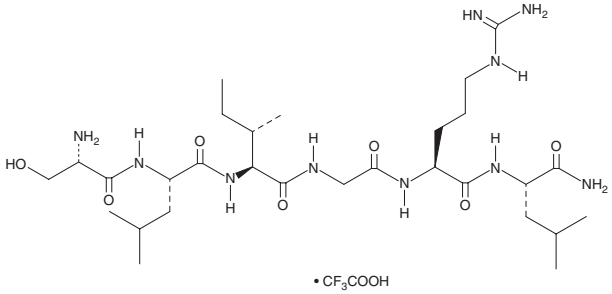
# PRODUCT INFORMATION

## SLIGRL-$NH_2$ (trifluoroacetate salt)

*Item No. 16723*

**Formal Name:** L-seryl-L-leucyl-L-isoleucylglycyl-L-arginyl-L-Leucinamide, trifluoroacetate salt
**MF:** $C_{29}H_{56}N_{10}O_7 \bullet XCF_3COOH$
**FW:** 656.8
**Purity:** ≥98%
**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

SLIGRL-$NH_2$ (trifluoroacetate salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the SLIGRL-$NH_2$ (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. SLIGRL-$NH_2$ (trifluoroacetate salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of SLIGRL-$NH_2$ (trifluoroacetate salt) is approximately 5 mg/ml in ethanol and approximately 20 mg/ml in DMSO and DMF.

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 SLIGRL-$NH_2$ can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of SLIGRL-$NH_2$ in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Proteinase-activated receptor 2 (PAR2) is a G protein-coupled receptor that is cleaved by serine proteases, resulting in self-activation of the receptor by a tethered ligand.[1,2] The ligand corresponds to residues 39-44 (SLIGRL in mouse PAR2).[1,2] SLIGRL-$NH_2$ is a recombinant peptide that activates PAR2 ($EC_{50}$ = ~5 µM), without requiring receptor cleavage.[1,2] This peptide does not activate PAR1. Through its effects on PAR2, SLIGRL-$NH_2$ stimulates gastric and intestinal smooth muscle contraction and induces thermal hyperalgesia in mice.[3,4] SLIGRL-$NH_2$ is used to explore signaling through PAR2 in cells and in animals.[5,6]

### References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3. Kawabata, A., Kuroda, R., Nagata, N., *et al. In vivo* evidence that protease-activated receptors 1 and 2 modulate gastrointestinal transit in the mouse. *Br. J. Pharmacol.* **133(8)**, 1213-1218 (2001).
4. Liu, Q., Weng, H.-J., Patel, K.N., *et al.* The distinct roles of two GPCRs, MrgprC11 and PAR2, in itch and hyperalgesia. *Sci. Signal.* **4(181)**, 1-6 (2011).
5. Sriwai, W., Mahavadi, S., Al-Shboul, O., *et al.* Distinctive G protein-dependent signaling by protease-activated receptor 2 (PAR2) in smooth muscle: Feedback inhibition of RhoA by cAMP-independent PKA. *PLoS One* **8(6)**, 1-12 (2013).
6. Elmariah, S.B., Reddy, V.B., and Lerner, E.A. Cathepsin S signals *via* PAR2 and generates a novel tethered ligand receptor agonist. *PLoS One* **9(6)**, 1-9 (2014).





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