



LKT Laboratories, Inc.

SFLLR

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## Product Information

Product ID S2044

CAS No.

Chemical Name

Synonym Thrombin Receptor Agonist (1-5)

Formula  $C_{30}H_{50}N_8O_7$

Formula Wt. 634.78

Melting Point

Purity  $\geq 95\%$

Solubility Soluble in water.

Store Temp  $-20^{\circ}C$

Ship Temp Ambient

**Description** SFLLR is a peptide agonist of protease-activated receptor type 1 (PAR1, also known as the thrombin receptor) that induces platelet adhesion and aggregation, mimicking the effects of thrombin. SFLLR exhibits pro-thrombotic, pro-angiogenic, and pro-inflammatory activities. In vagal motor neurons, SFLLR induces apoptosis. SFLLR increases release of pro-matrix metalloproteinase 9 (pro-MMP9) from fibroblasts in a JAK/STAT3-dependent manner; it also increases expression of matrix metalloproteinase 2 (MMP2) and induces angiogenesis in endothelial cells. SFLLR increases release of IL-6 from T cells as well. Additionally, this peptide can increase  $Na^{+}$  current in cardiomyocytes.

H-Ser-Phe-Leu-Leu-Arg-OH

**Bulk quantities available upon request**

Product ID	Size
S2044	1 mg
S2044	2 mg
S2044	5 mg

**References** Wu X, Zhang W, Li JY, et al. Induction of apoptosis by thrombin in the cultured neurons of dorsal motor nucleus of the vagus. *Neurogastroenterol Motil.* 2011 Mar;23(3):279-85, e123-4. PMID: 21143557.

Pinet C, Algalarrondo V, Sablayrolles S, et al. Protease-activated receptor-1 mediates thrombin-induced persistent sodium current in human cardiomyocytes. *Mol Pharmacol.* 2008 Jun;73(6):1622-31. PMID: 18326052.

Wang L, Luo J, He S. Induction of MMP-9 release from human dermal fibroblasts by thrombin: involvement of JAK/STAT3 signaling pathway in MMP-9 release. *BMC Cell Biol.* 2007 May 7;8:14. PMID: 17480240.

Li T, He S. Induction of IL-6 release from human T cells by PAR-1 and PAR-2 agonists. *Immunol Cell Biol.* 2006 Oct;84(5):461-6. PMID: 16869943.

Maragoudakis ME, Kraniti N, Giannopoulou E, et al. Modulation of angiogenesis and progelatinase a by thrombin receptor mimetics and antagonists. *Endothelium.* 2001;8(3):195-205. PMID: 11824472.

Sabo T, Gurwitz D, Motola L, et al. Structure-activity studies of the thrombin receptor activating peptide. *Biochem Biophys Res Commun.* 1992 Oct 30;188(2):604-10. PMID: 1332704.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.