Product Data Sheet

Product Name:	Protease-Activated Receptor-1, PAR-1 Agonist
Catalog Number:	AS-61530 (1 mg) Lot Number: See label on vial
Sequence:	H-Thr-Phe-Leu-Leu-Arg-Asn-OH (3-letter code) TFLLRN (1-letter code)
Molecular Weight:	762.9
Peptide Purity:	>95%
Appearance:	Lyophilized white powder
Peptide Reconstitution:	PAR-1 peptide is freely soluble in water.

Storage: PAR-1 peptide is shipped at ambient temperature. Upon receipt, store lyophilized peptide at –20°C or lower. Reconstituted peptide can be aliquoted and stored at –20°C or lower.

Description: This protease-activated receptor-1 (PAR-1) selective peptide induces cyclooxygenase-2 (COX-2) protein and mRNA expression in human endothelial cells. Studies show that intratracheal instillation of the PAR1-specific peptide increases lung edema during high-tidal-volume ventilation. Ref: Syeda,, F. et al. *J. Biol. Chem* **281**, 11792 (2006); Jenkins, R. et al. *J. Clin. Invest*. **116**, 1606 (2006).

Additional Information: *Listed below are relevant information that may provide a guideline on how to use this product. End users will have to adapt to their own specific applications.*

To determine if PAR-1 activation leads to chemotaxis of monocytes, the chemotaxis assay was repeated using HBSS alone (negative control), 10 and 100 ng/mL of MCP-1 (positive control), 1 and 5 µg/mL of cathepsin G, and 1 and 5 µg/mL of PAR-1 agonist (AnaSpec). Because PBMCs do not express PAR-2, PAR-2 agonist (AnaSpec) was also used as a negative control at concentrations of 1 and 5 µg/mL-Wilson, TJ. et al. *Cancer Res.* **69**, 3188 (2009).

The stimulants used were thrombin (Amersham Biosciences); the PAR1 agonist peptides SFLLRN, FSLLRN, TFLLRN, and FTLLRN (Anaspec); and TGF-β1 (R&D Systems). Itgb6$^{-/-}$ and WT control mice were bred at UCSF, and C57BL/6J mice (8 weeks old) were purchased from Jackson Laboratory. All experiments were approved by the UCSF Institutional Animal Care and Use Committee. Mice were injected i.p. with either anti-$\alpha_v\beta_6$ mAb 3G9 (1 mg/kg; Biogen Idec) or control antibody (1E6) 16 hours before the experiment. Mice were anesthetized with i.p. ketamine (90 mg/kg) and xylazine (10 mg/kg), and HBSS (25 ml), TFLLRN (25 mM, 25 ml), or FTLLRN (25 mM, 25 ml) was instilled into the trachea-Jenkins, RG. et al. *J. Clin. Invest.* **116**, 1606 (2006).

Published Citations:

Kataoka, H. et al. *Blood* **102**, 3224 (2004).
Rauch, BH. et al. *Circ. Res.* **94**, 340 (2004).

Jenkins, RG. et al. *J. Clin. Invest.* **116**, 1606 (2006).
Firth, AL. et al. *Am. J. Physiol. Heart Circ. Physiol.* **296**, L979 (2009).
Wilson, TJ. et al. *Cancer Res.* **69**, 3188 (2009).

Related Products:

Name	Cat #	Size
Protease-Activated Receptor-1, PAR-1 Agonist, amide TFLLRNPNDK-NH2	AS-62936	1 mg
Protease-Activated Receptor-1, PAR-1 Agonist, amide TFLLRN-NH2	AS-62937	5 mg
Protease-Activated Receptor-2, PAR-2 Agonist, amide SLIGKV-NH2	AS-60217-5	5 mg
Protease-Activated Receptor-3, PAR-3 Agonist, amide SFNGGP-NH2	AS-62938	1 mg
Protease-Activated Receptor-3 (1-6), PAR-3 (1-6), human TFRGAP-NH2	AS-62657	1 mg
Protease-Activated Receptor-4, PAR-4 Agonist, amide, murine GYPGKF-NH2	AS-60778	1 mg
Protease-Activated Receptor-4, PAR-4 Agonist, amide AYPGKF-NH2	AS-60218-1 AS-60218-5	1 mg 5 mg

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