

PAR-3 (H-103): sc-5598

BACKGROUND

Thrombin receptor (also designated protease-activated receptor-1 or PAR-1), PAR-2 and PAR-3 compose a distinct class of G protein-coupled receptors activated by proteolysis. Cleavage of these receptors by proteases occurs within the amino-terminal extracellular domain. Thrombin, a serine protease involved in platelet aggregation and blood coagulation, activates the thrombin receptor, resulting in elevated intracellular calcium levels in platelets. Thrombin also cleaves PAR-3 *in vitro*, suggesting that PAR-3 may be involved in thrombosis or mitogenesis. Thrombin receptor and PAR-4 appear to account for most thrombin signaling in platelets. Activation of PAR-2 *in vitro* is induced by trypsin, suggesting that PAR-2 is not an alternative thrombin receptor. Cytokines including TNF- α and IL-1 β increase PAR-2 expression, indicating PAR-2 involvement in the acute inflammatory response.

CHROMOSOMAL LOCATION

Genetic locus: F2RL2 (human) mapping to 5q13.3; F2rl2 (mouse) mapping to 13 D1.

SOURCE

PAR-3 (H-103) is a rabbit polyclonal antibody raised against amino acids 1-103 of PAR-3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PAR-3 (H-103) is recommended for detection of PAR-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PAR-3 siRNA (h): sc-37143, PAR-3 siRNA (m): sc-37144, PAR-3 shRNA Plasmid (h): sc-37143-SH, PAR-3 shRNA Plasmid (m): sc-37144-SH, PAR-3 shRNA (h) Lentiviral Particles: sc-37143-V and PAR-3 shRNA (m) Lentiviral Particles: sc-37144-V.

Molecular Weight of PAR-3: 43 kDa.

Positive Controls: rat eye extract: sc-364805, HL-60 whole cell lysate: sc-2209 or CCD-1064Sk cell lysate: sc-2263.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

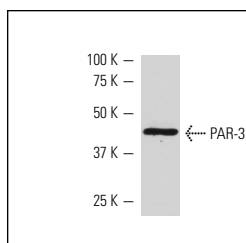
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

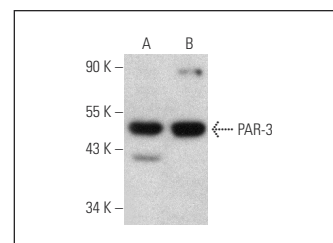
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



PAR-3 (H-103): sc-5598. Western blot analysis of PAR-3 expression in rat eye tissue extract.



PAR-3 (H-103): sc-5598. Western blot analysis of PAR-3 expression in HL-60 (A) and CCD-1064Sk (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Uehara, A., et al. 2003. Neutrophil serine proteinases activate human nonepithelial cells to produce inflammatory cytokines through protease-activated receptor 2. *J. Immunol.* 170: 5690-5696.
- Cheng, T., et al. 2003. Activated protein C blocks p53-mediated apoptosis in ischemic human brain endothelium and is neuroprotective. *Nat. Med.* 9: 338-342.
- Dömötör, E., et al. 2003. Activated protein C alters cytosolic calcium flux in human brain endothelium via binding to endothelial protein C receptor and activation of protease activated receptor-1. *Blood* 101: 4797-4801.
- Li, X., et al. 2008. Mature dendritic cells express functional Thrombin receptors triggering chemotaxis and CCL18/pulmonary and activation-regulated chemokine induction. *J. Immunol.* 181: 1215-1223.
- Ostrowska, E., et al. 2008. The protease-activated receptor-3 (PAR-3) can signal autonomously to induce interleukin-8 release. *Cell. Mol. Life Sci.* 65: 970-981.
- Chang, C.J., et al. 2009. Thrombin regulates matrix metalloproteinase-9 expression in human monocytes. *Biochem. Biophys. Res. Commun.* 385: 241-246.
- Shavit, E., et al. 2011. Anatomical localization of protease-activated receptor-1 and protease-mediated neuroglial crosstalk on peri-synaptic astrocytic endfeet. *J. Neurochem.* 119: 460-473.
- Xu, G., et al. 2015. NGL-2 is a new partner of PAR complex in axon differentiation. *J. Neurosci.* 35: 7153-7164.

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Try **PAR-3 (G-4): sc-393127** or **PAR-3 (8E8): sc-53819**, our highly recommended monoclonal alternatives to PAR-3 (H-103).