SANTA CRUZ BIOTECHNOLOGY, INC.

PAR-2 (C-17): sc-8205

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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-1β increase PAR-2 expression, indicating PAR-2 involvement in the acute inflammatory response.

CHROMOSOMAL LOCATION

Genetic locus: F2RL1 (human) mapping to 5q13.3; F2rl1 (mouse) mapping to 13 D1.

SOURCE

PAR-2 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PAR-2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-8205 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PAR-2 (C-17) is recommended for detection of PAR-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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-2 siRNA (h): sc-36188, PAR-2 siRNA (m): sc-36187, PAR-2 shRNA Plasmid (h): sc-36188-SH, PAR-2 shRNA Plasmid (m): sc-36187-SH, PAR-2 shRNA (h) Lentiviral Particles: sc-36188-V and PAR-2 shRNA (m) Lentiviral Particles: sc-36187-V.

Molecular Weight (predicted) of PAR-2: 44 kDa.

Molecular Weight (observed) of PAR-2: 50-100 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, COLO 320DM cell lysate: sc-2226 or NIH/3T3 whole cell lysate: sc-2210.

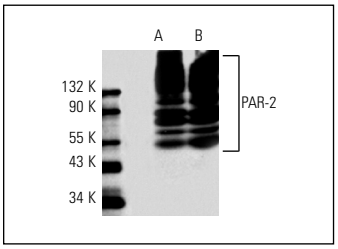
STORAGE

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

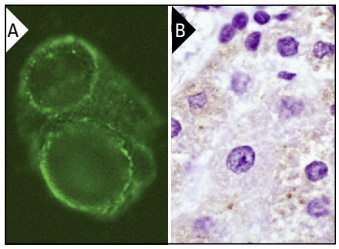
RESEARCH USE

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

DATA



PAR-2 (C-17): sc-8205. Western blot analysis of differentially glycosylated forms of PAR-2 expressed in COLO 320DM (**A**) and Hep G2 (**B**) whole cell lysates.



PAR-2 (C-17): sc-8205. Immunofluorescence staining of methanol-fixed Hep G2 cells showing membrane staining (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human liver tissue showing membrane and cytoplasmic staining (**B**).

SELECT PRODUCT CITATIONS

1. Schmidlin, F., et al. 2002. Protease-activated receptor 2 mediates eosinophil infiltration and hyperreactivity in allergic inflammation of the airway. J. Immunol. 169: 5315-5321.
2. Jahan I., et al. 2007. Role of protease activated receptor-2 in tumor advancement of ovarian cancers. Ann. Oncol. 18: 1506-1512.
3. Luo, W., et al. 2007. p24A, a type I transmembrane protein, controls ARF1-dependent resensitization of protease-activated receptor-2 by influence on receptor trafficking. J. Biol. Chem. 282: 30246-30255.
4. Lin, K.W., et al. 2008. Protease-activated receptor-2 (PAR-2) is a weak enhancer of mucin secretion by human bronchial epithelial cells *in vitro.* Int. J. Biochem. Cell Biol. 40: 1379-1388.
5. Barrera, G.J., et al. 2009. Immunoglobulin A with protease activity secreted in human milk activates PAR-2 receptors, of intestinal epithelial cells HT-29, and promotes β-defensin 2 expression. Immunol. Lett. 123: 52-59.
6. Radhakrishnan, Y., et al. 2009. Novel partners of SPAG11B isoform D in the human male reproductive tract. Biol. Reprod. 81: 647-656.
7. Hasdemir, B., et al. 2009. Endosomal deubiquitinating enzymes control ubiquitination and down-regulation of protease-activated receptor 2. J. Biol. Chem. 284: 28453-28466.
8. Luo, Y., et al. 2010. Long-term downregulation of protease-activated receptor-2 expression in distal colon in rats following bacillary dysentery. Regul. Pept. 163: 49-56.