SANTA CRUZ BIOTECHNOLOGY, INC.

PAR-2 (N-19): sc-8206

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.

REFERENCES

1. Santulli, R.J., et al. 1995. Evidence for the presence of a protease-activated receptor distinct from the thrombin receptor in human keratinocytes. Proc. Natl. Acad. Sci. USA 92: 9151-9155.
2. Lerner, D.J., et al. 1996. Agonist recognition by proteinase-activated receptor 2 and thrombin receptor. Importance of extracellular loop interactions for receptor function. J. Biol. Chem. 271: 13943-13947.

CHROMOSOMAL LOCATION

Genetic locus: F2RL1 (human) mapping to 5q13.3.

SOURCE

PAR-2 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PAR-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8206 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PAR-2 (N-19) is recommended for detection of PAR-2 of 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) 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 shRNA Plasmid (h): sc-36188-SH and PAR-2 shRNA (h) Lentiviral Particles: sc-36188-V.

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

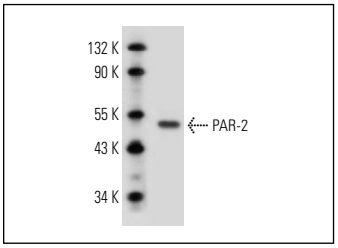
Molecular Weight (observed) of PAR-2: 50-100 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, WiDR cell lysate: sc-24779 or Hep G2 cell lysate: sc-2227.

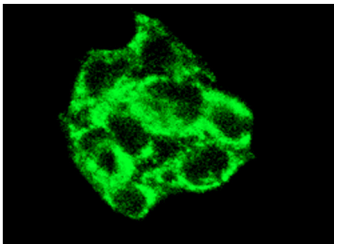
STORAGE

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

DATA



PAR-2 (N-19): sc-8206. Western blot analysis of PAR-2 expression in COLO 320DM whole cell lysate.



PAR-2 (N-19): sc-8206. Immunofluorescence staining of methanol-fixed Hep G2 cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Ikeda, O., et al. 2003. Expression of proteinase-activated receptor-2 in human pancreatic cancer: a possible relation to cancer invasion and induction of fibrosis. Int. J. Oncol. 22: 295-300.
2. Jahan, I., et al. 2007. Role of protease activated receptor-2 in tumor advancement of ovarian cancers. Ann. Oncol. 18: 1506-1512.
3. Rudack, C., et al. 2007. PAR-2 activation regulates IL-8 and GRO-α synthesis by NFκB, but not RANTES, IL-6, eotaxin or TARC expression in nasal epithelium. Clin. Exp. Allergy 37: 1009-1022.
4. Yun, L.W., et al. 2007. Blockade of protease-activated receptors on T cells correlates with altered proteolysis of CD27 by gingipains of *Porphyromonas gingivalis*. Clin. Exp. Immunol. 150: 217-229.
5. Chen, C.L., et al. 2008. The effect of water-soluble chitosan on macrophage activation and the attenuation of mite allergen-induced airway inflammation. Biomaterials 29: 2173-2182.
6. Christerson, U., et al. 2009. Increased expression of protease-activated receptor-2 in mucosal mast cells in Crohn's ileitis. J. Crohns Colitis 3: 100-108.
7. St-Onge, M., et al. 2010. Proteinase-activated receptor-2 up-regulation by Fcγ-receptor activation in human neutrophils. FASEB J. 24: 2116-2125.

RESEARCH USE

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