SANTA CRUZ BIOTECHNOLOGY, INC.

PAR-3 (8E8): sc-53819

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 TNFα and IL-1β 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 (8E8) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 31-47 of PAR-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PAR-3 (8E8) is available conjugated to agarose (sc-53819 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53819 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53819 PE), fluorescein (sc-53819 FITC), Alexa Fluor® 488 (sc-53819 AF488), Alexa Fluor® 546 (sc-53819 AF546), Alexa Fluor® 594 (sc-53819 AF594) or Alexa Fluor® 647 (sc-53819 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53819 AF680) or Alexa Fluor® 790 (sc-53819 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

PAR-3 (8E8) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10^6 cells).

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.

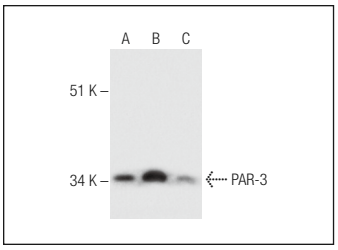
Molecular Weight of PAR-3: 43 kDa.

Positive Controls: M1 whole cell lysate: sc-364782, LADMAC whole cell lysate: sc-364189 or NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



PAR-3 (8E8): sc-53819. Western blot analysis of PAR-3 expression in LADMAC (**A**), M1 (**B**) and NIH/3T3 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. St-Onge, M., et al. 2010. Proteinase-activated receptor-2 up-regulation by Fcγ-receptor activation in human neutrophils. FASEB J. 24: 2116-2125.
2. Beirowski, B., et al. 2011. Sir-two-homolog 2 (Sirt2) modulates peripheral myelination through polarity protein Par-3/atypical protein kinase C (aPKC) signaling. Proc. Natl. Acad. Sci. USA 108: E952-E961.
3. Nieuwenhuizen, L., et al. 2013. Stimulation of naïve monocytes and PBMCs with coagulation proteases results in Thrombin-mediated and PAR-1-dependent cytokine release and cell proliferation in PBMCs only. Scand. J. Immunol. 77: 339-349.
4. López, M.L., et al. 2014. Expression pattern of protease activated receptors in lymphoid cells. Cell. Immunol. 288: 47-52.
5. Sugahara, M., et al. 2019. Vitronectin is involved in the morphological transition of neurites in retinoic acid-induced neurogenesis of neuroblastoma cell line Neuro2a. Neurochem. Res. 44: 1621-1635.
6. García-González, G., et al. 2019. Triggering of protease-activated receptors (PARs) induces alternative M2 macrophage polarization with impaired plasticity. Mol. Immunol. 114: 278-288.

RESEARCH USE

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

PROTOCOLS

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