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.

REFERENCES


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 IgG2b 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 either phycoerythrin (sc-53819 PE) or fluorescein (sc-53819 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

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.

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: 1:10000-1:100000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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

SELECT PRODUCT CITATIONS


PROTOCOLS

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