SANTA CRUZ BIOTECHNOLOGY, INC.

Thrombin R (C-18): sc-8202

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Thrombin is a serine protease that is involved in platelet aggregation and blood coagulation. It is cleaved from its precursor, Prothrombin, and converts Fibrinogen to Fibrin in the final step of the clotting cascade. Thrombin mediates its regulatory effects by activating cell surface receptors. These receptors, including Thrombin R (also designated PAR-1, for protease-activated receptor-1), PAR-2 and PAR-3, are members of the G protein-coupled receptor family, and share a similar gene structure. Thrombin cleaves its receptor, releasing a 41 amino acid peptide that acts as a platelet agonist. Upon this activation by Thrombin, the Thrombin Rs trigger an increase in cytosolic Ca^{2+} concentration. Unactivated Thrombin R cycles between the cell surface and an intracellular pool, while activated Thrombin R internalizes rapidly and is degraded in the lysosomes. The human Thrombin R is also known to be regulated by Sp1 and Sp3 transcription factors.

CHROMOSOMAL LOCATION

Genetic locus: F2R (human) mapping to 5q13.3; F2r (mouse) mapping to 13 D1.

SOURCE

Thrombin R (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Thrombin R 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-8202 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Thrombin R (C-18) is recommended for detection of Thrombin R 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Thrombin R (C-18) is also recommended for detection of Thrombin R in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Thrombin R siRNA (h): sc-36663, Thrombin R siRNA (m): sc-36664, Thrombin R shRNA Plasmid (h): sc-36663-SH, Thrombin R shRNA Plasmid (m): sc-36664-SH, Thrombin R shRNA (h) Lentiviral Particles: sc-36663-V and Thrombin R shRNA (m) Lentiviral Particles: sc-36664-V.

Molecular Weight of Thrombin R: 47 kDa.

Molecular Weight of glycosylated Thrombin R: 66 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, MIA PaCa-2 cell lysate: sc-2285 or ECV304 cell lysate: sc-2269.

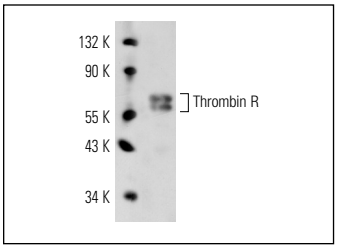
RESEARCH USE

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

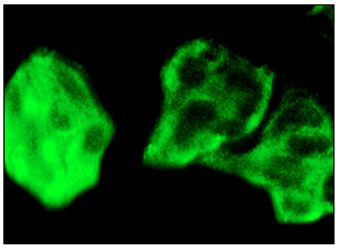
STORAGE

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

DATA



Thrombin R (C-18): sc-8202. Western blot analysis of Thrombin R expression in mouse PBL whole cell lysate.



Thrombin R (C-18): sc-8202. Immunofluorescence staining of methanol-fixed Hep G2 cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Even-Ram, S.C., et al. 2003. The pattern of expression of protease-activated receptors (PARs) during early trophoblast development. J. Pathol. 200: 47-52.
2. Vergnolle, N., et al. 2004. A role for proteinase-activated receptor-1 in inflammatory bowel diseases. J. Clin. Invest. 114: 1444-1456.
3. Grisaru-Granovsky, S., et al. 2005. Differential expression of protease activated receptor 1 (Par1) and pY397FAK in benign and malignant human ovarian tissue samples. Int. J. Cancer 113: 372-378.
4. Zheng, G.Q., et al. 2009. Long-time course of protease-activated receptor-1 expression after intracerebral hemorrhage in rats. Neurosci. Lett. 459: 62-65.
5. Liao, M., et al. 2011. Prognostic value of matrix metalloproteinase-1/ proteinase-activated receptor-1 signaling axis in hepatocellular carcinoma. Pathol. Oncol. Res. 18: 397-403.
6. Du, X., et al. 2011. Correlation between MMP1-PAR1 axis and clinical outcome of primary gallbladder carcinoma. Jpn. J. Clin. Oncol. 41: 1086-1093.
7. Peng, H.H., et al. 2012. MMP-1/PAR-1 signal transduction axis and its prognostic impact in esophageal squamous cell carcinoma. Braz. J. Med. Biol. Res. 45: 86-92.

PROTOCOLS

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