

EPCR (G-20): sc-18062

BACKGROUND

Thrombomodulin™ is an endothelial specific receptor that forms a complex with thrombin, a protein with procoagulant, inflammatory and anticoagulant effects. The TM/thrombin complex activates protein C (PC) to generate activated protein C (APC) and initiate the APC anticoagulant pathway. APC attenuates thrombin formation through the inactivation, by limited proteolysis, of two significant cofactors of blood clot formation, Factor Va and Factor VIIIa. This process is augmented by the activity of the endothelial cell Protein C receptor (EPCR), which binds both PC and APC with high affinity. The EPCR gene maps to human chromosome 20q11.22 and encodes an anticoagulant that is preferentially expressed on large blood vessel endothelium in the heart and lung with some expression in capillaries in the lung and skin. EPCR, also designated CCD41 in mouse, is a member of the major histocompatibility complex and displays significant homology to CD1. Soluble plasma EPCR is thought to inhibit the membrane-bound EPCR activation of the APC pathway.

REFERENCES

1. Fukudome, K., et al. 1995. Molecular cloning and expression of murine and bovine endothelial cell protein C/activated protein C receptor (EPCR). The structural and functional conservation in human, bovine, and murine EPCR. *J. Biol. Chem.* 270: 5571-5577.
2. Fukudome, K., et al. 1996. The endothelial cell protein C receptor. Cell surface expression and direct ligand binding by the soluble receptor. *J. Biol. Chem.* 271: 17491-17498.
3. Kurosawa, S., et al. 1997. Identification of functional endothelial protein C receptor in human plasma. *J. Clin. Invest.* 100: 411-418.
4. Fukudome, K., et al. 1998. Activation mechanism of anticoagulant protein C in large blood vessels involving the endothelial cell protein C receptor. *J. Exp. Med.* 187: 1029-1035.
5. Ye, X., et al. 1999. The endothelial cell Protein C receptor (EPCR) functions as a primary receptor for Protein C activation on endothelial cells in arteries, veins and capillaries. *Biochem. Biophys. Res. Commun.* 259: 671-677.

CHROMOSOMAL LOCATION

Genetic locus: Procr (mouse) mapping to 2 H1.

SOURCE

EPCR (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EPCR of mouse 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-18062 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

EPCR (G-20) is recommended for detection of EPCR of mouse and rat 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 EPCR siRNA (m): sc-39933, EPCR shRNA Plasmid (m): sc-39933-SH and EPCR shRNA (m) Lentiviral Particles: sc-39933-V.

Molecular Weight (predicted) of EPCR: 27 kDa.

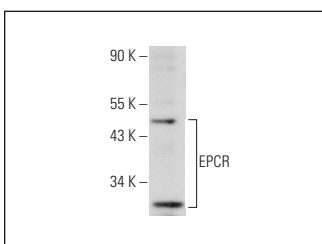
Molecular Weight (observed) of EPCR: 32 kDa.

Positive Controls: mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), 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). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



EPCR (G-20): sc-18062. Western blot analysis of EPCR expression in mouse brain tissue extract.

RESEARCH USE

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

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Try **EPCR (LMR-42): sc-57106**, our highly recommended monoclonal alternative to EPCR (G-20).