

ECSCR (Q-14): sc-241395

BACKGROUND

ECSCR (endothelial cell-specific chemotaxis regulator), also known as ARIA or ECSM2, is a 205 amino acid single-pass type I membrane protein belonging to the ECSCR family. Expressed in endothelial-specific cells and blood vessels, ECSCR interacts with Filamin 1 and regulates endothelial chemotaxis and tube formation. It is suggested that ECSCR participates in suppressing tyrosine phosphorylation signaling, cell-shape changes and Actin cytoskeletal rearrangement. ECSCR reduces the signal of the Shc-Ras-ERK pathway thereby decreasing EGF-induced cell migration by communicating with EGFR (epidermal growth factor receptor). It is thought that ECSCR uniquely regulates both endothelial apoptosis and angiogenesis by modulating proteasomal degradation of c-IAP1 and c-IAP2 in endothelial cells. Evolutionarily conserved, ECSCR plays a pivotal role in the pathogenesis of many angiogenesis-related diseases.

REFERENCES

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2. Komaletdinova, F.M. and Pinaev, G.P. 2006. The Filamin in cell signaling. *Tsitologiya* 48: 924-934.
3. Armstrong, L.J., et al. 2008. ECSM2, an endothelial specific Filamin a binding protein that mediates chemotaxis. *Arterioscler. Thromb. Vasc. Biol.* 28: 1640-1646.
4. Verissimo, A.R., et al. 2009. Functionally defining the endothelial transcriptome, from Robo4 to ECSCR. *Biochem. Soc. Trans.* 37: 1214-1217.
5. Ma, F., et al. 2009. Endothelial cell-specific molecule 2 (ECSM2) modulates Actin remodeling and epidermal growth factor receptor signaling. *Genes Cells* 14: 281-293.
6. Ikeda, K., et al. 2009. Identification of ARIA regulating endothelial apoptosis and angiogenesis by modulating proteasomal degradation of cIAP-1 and cIAP-2. *Proc. Natl. Acad. Sci. USA* 106: 8227-8232.
7. Verma, A., et al. 2010. Endothelial cell-specific chemotaxis receptor (ECSCR) promotes angioblast migration during vasculogenesis and enhances VEGF receptor sensitivity. *Blood* 115: 4614-4622.

CHROMOSOMAL LOCATION

Genetic locus: *Ecscr* (mouse) mapping to 18 B2.

SOURCE

ECSCR (Q-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of ECSCR 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-241395 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ECSCR (Q-14) is recommended for detection of ECSCR of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 ECSCR siRNA (m): sc-108146, ECSCR shRNA Plasmid (m): sc-108146-SH and ECSCR shRNA (m) Lentiviral Particles: sc-108146-V.

Molecular Weight of glycosylated ECSCR: 60 kDa.

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) 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.

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.

PROTOCOLS

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