SANTA CRUZ BIOTECHNOLOGY, INC.

KIF18B (N-15): sc-247342

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CRIM1 (cysteine-rich motor neuron 1) is a glycosylated type I transmembrane protein expressed in pericytes surrounding the arterial vasculature, podocytes, parietal cells, and mesangial cells of the glomerulus and in the developing spinal cord. It consists of six chordin-like cysteine-rich repeats (CRRs) and an N-terminal insulin-like growth factor binding protein-like motif. The CRRs are contained in the extracellular domain which can be cleaved and released as a secreted ectodomain from the cell membrane. CRIM1 may be involved in the regulation of BMP signaling activity in kidney as well as various other tissues. CRIM1 interacts with BMP4 and BMP7 via the CRRs and functions as an antagonist. This interaction leads to the tethering of pre-BMP to the cell surface and reduced production, processing and secretion of mature BMP. In addition, CRIM1 may also play a role in capillary formation and maintenance during angiogenesis.

REFERENCES

1. Kolle, G., Georgas, K., Holmes, G.P., Little, M.H. and Yamada, T. 2000. CRIM1, a novel gene encoding a cysteine-rich repeat protein, is developmentally regulated and implicated in vertebrate CNS development and organogenesis. Mech. Dev. 90: 181-193.
2. Georgas, K., Bowles, J., Yamada, T., Koopman, P. and Little, M.H. 2000. Characterisation of CRIM1 expression in the developing mouse urogenital tract reveals a sexually dimorphic gonadal expression pattern. Dev. Dyn. 219: 582-587.
3. Kolle, G., Jansen, A., Yamada, T. and Little, M. 2002. *In ovo* electroporation of CRIM1 in the developing chick spinal cord. Dev. Dyn. 226: 107-111.
4. Glienke, J., Sturz, A., Menrad, A. and Thierauch, K.H. 2002. CRIM1 is involved in endothelial cell capillary formation *in vitro* and is expressed in blood vessels *in vivo*. Mech. Dev. 119: 165-175.
5. Wilkinson, L., Kolle, G., Wen, D., Piper, M., Scott, J. and Little, M. 2003. CRIM1 regulates the rate of processing and delivery of bone morphogenetic proteins to the cell surface. J. Biol. Chem. 278: 34181-34188.
6. Liu, F., Lei, W., O'Rourke, J.P. and Ness, S.A. 2006. Oncogenic mutations cause dramatic, qualitative changes in the transcriptional activity of c-Myb. Oncogene 25: 795-805.
7. Sun, J., Zhuang, F.F., Mullersman, J.E., Chen, H., Robertson, E.J., Warburton, D., Liu, Y.H. and Shi, W. 2006. BMP4 activation and secretion are negatively regulated by an intracellular gremlin-BMP4 interaction. J. Biol. Chem. 281: 29349-29356.

CHROMOSOMAL LOCATION

Genetic locus: KIF18B (human) mapping to 17q21.31; Kif18b (mouse) mapping to 11 E1.

STORAGE

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

SOURCE

KIF18B (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of KIF18B 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-247342 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KIF18B (N-15) is recommended for detection of KIF18B of mouse, rat and human 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); non cross-reactive with KIF18A.

Suitable for use as control antibody for CRIM1 siRNA (h): sc-94828, CRIM1 siRNA (m): sc-142569, CRIM1 shRNA Plasmid (h): sc-94828-SH, CRIM1 shRNA Plasmid (m): sc-142569-SH, CRIM1 shRNA (h) Lentiviral Particles: sc-94828-V and CRIM1 shRNA (m) Lentiviral Particles: sc-142569-V.

Molecular Weight of CRIM1: 140 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.

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.