SANTA CRUZ BIOTECHNOLOGY, INC.

CRB1 (P-14): sc-22737

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The transmembrane protein Crumbs plays a crucial role in epithelial cell polarity and photoreceptor development in *Drosophila melanogaster* embryos, but the first identified human homolog, CRB1, is only expressed in retina and some parts of the brain, leaving room for another homolog to function in epithelial tissues. Leber congenital amaurosis and progressive retinitis pigmentosa are caused by loss of CRB1 function. A second homolog, CRB3, fills the gap, showing expression in epithelial tissues as well as skeletal muscles. CRB3 shares a cytoplasmic domain with other Crumbs proteins, but contains only a very short extracellular domain, through which it interacts with Par6, a regulator of epithelial polarity and tight junction formation. Thus, this specialized isoform provides a connection between apical membrane formation and tight junction regulation.

REFERENCES

1. Roh, M.H., et al. 2002. The Maguk protein, Pals1, functions as an adapter, linking mammalian homologues of Crumbs and Discs Lost. J. Cell Biol. 157: 161-172.
2. Makarova, O., et al. 2003. Mammalian Crumbs3 is a small transmembrane protein linked to protein associated with LIN-7 (Pals1). Gene 302: 21-29.
3. van de Pavert, S.A., et al. 2004. Crumbs homologue 1 is required for maintenance of photoreceptor cell polarization and adhesion during light exposure. J. Cell Sci. 117: 4169-4177.
4. Lemmers C, et al. 2004. CRB3 binds directly to Par6 and regulates the morphogenesis of the tight junctions in mammalian epithelial cells. Mol. Biol. Cell 15: 1324-1333.

CHROMOSOMAL LOCATION

Genetic locus: Crb1 (mouse) mapping to 1 F.

SOURCE

CRB1 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CRB1 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-22737 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.

PROTOCOLS

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

APPLICATIONS

CRB1 (P-14) is recommended for detection of CRB1 of mouse 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).

CRB1 (P-14) is also recommended for detection of CRB1 in additional species, including canine.

Suitable for use as control antibody for CRB1 siRNA (m): sc-142559, CRB1 shRNA Plasmid (m): sc-142559-SH and CRB1 shRNA (m) Lentiviral Particles: sc-142559-V.

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.

SELECT PRODUCT CITATIONS

1. Fernández-Medarde, A., et al. 2009. RasGRF1 disruption causes retinal photoreception defects and associated transcriptomic alterations. J. Neurochem. 110: 641-652.

RESEARCH USE

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