SANTA CRUZ BIOTECHNOLOGY, INC.

reticulocalbin-3 (N-15): sc-162090

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Reticulocalbin-3, also known as RCN3 or EF-hand calcium-binding protein RLP49, is a 328 amino acid protein of the endoplasmic reticulum lumen that contains 6 EF-hand domains and belongs to the CREC (cab45/reticulocalbin/ERC45/calumenin) family. Reticulocalbin-3 contains five Arg-Xaa-Xaa-Arg motifs, which function as target sequences of SPCs (subtilisin-like proprotein convertases), a family of serine endoproteases that proteolytically activate proproteins. The synthesis of one such member, PACE4 (paired basic amino acid cleaving enzyme 4), is influenced by association and coexpression with reticulocalbin-3. The gene encoding reticulocalbin-3 maps to human chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc receptors (FcRs).

REFERENCES

1. Rehemtulla, A., et al. 1993. PACE4 is a member of the mammalian propeptidase family that has overlapping but not identical substrate specificity to PACE. Biochemistry 32: 11586-11590.
2. Teglund, S., et al. 1994. The pregnancy-specific glycoprotein (PSG) gene cluster on human chromosome 19: fine structure of the 11 PSG genes and identification of 6 new genes forming a third subgroup within the carcinoembryonic antigen (CEA) family. Genomics 23: 669-684.
3. Wang, L., et al. 2000. C-CAM1, a candidate tumor suppressor gene, is abnormally expressed in primary lung cancers. Clin. Cancer Res. 6: 2988-2993.
4. Trowsdale, J., et al. 2001. The genomic context of natural killer receptor extended gene families. Immunol. Rev. 181: 20-38.
5. Leeb, T. and Müller, M. 2004. Comparative human-mouse-rat sequence analysis of the ICAM gene cluster on HSA 19p13.2 and a 185-kb porcine region from SSC 2q. Gene 343: 239-244.
6. Tsuji, A., et al. 2006. A proteomic approach reveals transient association of reticulocalbin-3, a novel member of the CREC family, with the precursor of subtilisin-like proprotein convertase, PACE4. Biochem. J. 396: 51-59.
7. Barrow, A.D. and Trowsdale, J. 2008. The extended human leukocyte receptor complex: diverse ways of modulating immune responses. Immunol. Rev. 224: 98-123.

CHROMOSOMAL LOCATION

Genetic locus: RCN3 (human) mapping to 19q13.33; Rcn3 (mouse) mapping to 7 B4.

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.

SOURCE

reticulocalbin-3 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of reticulocalbin-3 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-162090 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

reticulocalbin-3 (N-15) is recommended for detection of reticulocalbin-3 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 reticulocalbin-1.

reticulocalbin-3 (N-15) is also recommended for detection of reticulocalbin-3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for reticulocalbin-3 siRNA (h): sc-97652, reticulocalbin-3 siRNA (m): sc-152815, reticulocalbin-3 shRNA Plasmid (h): sc-97652-SH, reticulocalbin-3 shRNA Plasmid (m): sc-152815-SH, reticulocalbin-3 shRNA (h) Lentiviral Particles: sc-97652-V and reticulocalbin-3 shRNA (m) Lentiviral Particles: sc-152815-V.

Molecular Weight of reticulocalbin-3: 37 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.

PROTOCOLS

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