

CapZIP (D-17): sc-160200

BACKGROUND

CapZIP (CapZ-interacting protein), also known as RCSD1 (RCSD domain-containing protein 1) or MK2S4, is a 416 amino acid protein that contains one RCSD domain and exists as 2 alternatively spliced isoforms. Expressed at high levels in skeletal muscle and present at lower levels in spleen, thymus and cardiac muscle, CapZIP interacts with CapZ- β and CapZ- α and, during times of cellular stress, is thought to regulate the F-actin-dependent remodeling of the actin filament assembly. The gene encoding CapZIP maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinsons disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Yamashita, A., et al. 2003. Crystal structure of CapZ: structural basis for actin filament barbed end capping. *EMBO J.* 22: 1529-1538.
2. Evers, C.E., et al. 2005. The phosphorylation of CapZ-interacting protein (CapZIP) by stress-activated protein kinases triggers its dissociation from CapZ. *Biochem. J.* 389: 127-135.
3. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
4. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.
5. Narita, A., et al. 2006. Structural basis of actin filament capping at the barbed-end: a cryoelectron microscopy study. *EMBO J.* 25: 5626-5633.
6. De Braekeleer, E., et al. 2007. A new partner gene fused to ABL1 in a t(1;9)(q24;q34)-associated B cell acute lymphoblastic leukemia. *Leukemia* 21: 2220-2221.
7. Cheung, C.L., et al. 2009. Pre-B cell leukemia homeobox 1 (PBX1) shows functional and possible genetic association with bone mineral density variation. *Hum. Mol. Genet.* 18: 679-687.

CHROMOSOMAL LOCATION

Genetic locus: *Rcsd1* (mouse) mapping to 1 H2.3.

SOURCE

CapZIP (D-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CapZIP of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160200 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CapZIP (D-17) is recommended for detection of CapZIP of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 CapZIP siRNA (m): sc-142009, CapZIP shRNA Plasmid (m): sc-142009-SH and CapZIP shRNA (m) Lentiviral Particles: sc-142009-V.

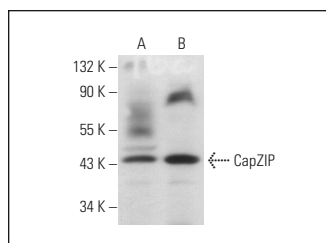
Molecular Weight of CapZIP: 45 kDa.

Positive Controls: M1 whole cell lysate: sc-364782 or rat skeletal muscle extract: sc-364810.

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



CapZIP (D-17): sc-160200. Western blot analysis of CapZIP expression in M1 whole cell lysate (A) and rat skeletal muscle tissue extract (B).

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.