SANTA CRUZ BIOTECHNOLOGY, INC.

# CapZIP (3F6): sc-517059

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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. Eyers, 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 cryo-electron microscopy study. EMBO J. 25: 5626-5633.
6. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610579. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. 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.
8. 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 (human) mapping to 1q24.2.

## SOURCE

CapZIP (3F6) is a mouse monoclonal antibody raised against amino acids 181-289 representing partial length CapZIP of human origin.

## PRODUCT

Each vial contains 100 µg $IgG_{2a}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CapZIP (3F6) is recommended for detection of CapZIP of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

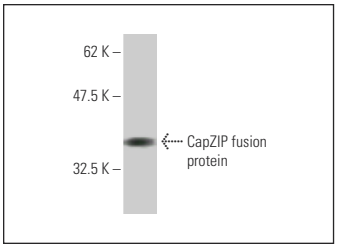
Suitable for use as control antibody for CapZIP siRNA (h): sc-88159, CapZIP shRNA Plasmid (h): sc-88159-SH and CapZIP shRNA (h) Lentiviral Particles: sc-88159-V.

Molecular Weight of CapZIP: 45 kDa.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA




CapZIP (3F6): sc-517059. Western blot analysis of human recombinant CapZIP fusion protein.

## 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 for detailed protocols and support products.