SANTA CRUZ BIOTECHNOLOGY, INC.

14-3-3 ε (T-16): sc-1020

BACKGROUND

14-3-3 proteins regulate many cellular processes relevant to cancer biology, notably apoptosis, mitogenic signaling and cell-cycle checkpoints. Seven isoforms comprise this family of signaling intermediates, denoted 14-3-3 β, γ, ε, ζ, η, θ and σ. 14-3-3 proteins form dimers that present two binding sites for ligand proteins, thereby bringing together two proteins that may not otherwise associate. These ligands largely share a 14-3-3 consensus binding motif and exhibit serine/threonine phosphorylation. 14-3-3 proteins function in broad regulation of these ligand proteins, by cytoplasmic sequestration, occupation of interaction domains and import/export sequences, prevention of degradation, activation/repression of enzymatic activity and facilitation of protein modification, and thus loss of expression contributes to a vast array of pathogenic cellular activities.

CHROMOSOMAL LOCATION

Genetic locus: YWHAE (human) mapping to 17p13.3; Ywhae (mouse) mapping to 11 B5.

SOURCE

14-3-3 ε (T-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a divergent domainof 14-3-3 ε 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-1020 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

14-3-3 ε (T-16) is recommended for detection of 14-3-3 ε of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

14-3-3 ε (T-16) is also recommended for detection of 14-3-3 ε in additional species, including equine, bovine, porcine, ovine, canine and avian.

Suitable for use as control antibody for 14-3-3 ε siRNA (h): sc-29588, 14-3-3 ε siRNA (m): sc-29589, 14-3-3 ε shRNA Plasmid (h): sc-29588-SH, 14-3-3 ε shRNA Plasmid (m): sc-29589-SH, 14-3-3 ε shRNA (h) Lentiviral Particles: sc-29588-V and 14-3-3 ε shRNA (m) Lentiviral Particles: sc-29589-V.

Molecular Weight of 14-3-3 ε: 30 kDa.

Positive Controls: 14-3-3 ε (h): 293T Lysate: sc-175743, SW480 cell lysate: sc-2219 or Caki-1 cell lysate: sc-2224.

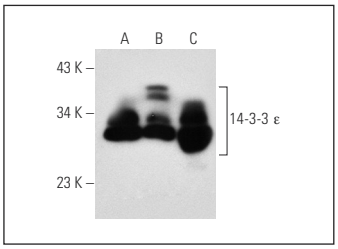
STORAGE

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

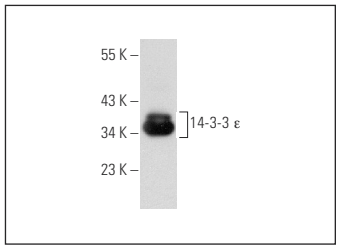
RESEARCH USE

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

DATA



14-3-3 ε (T-16): sc-1020. Western blot analysis of 14-3-3 ε expression in non-transfected 293T: sc-117752 (**A**), human 14-3-3 ε transfected 293T: sc-175743 (**B**) and SW480 (**C**) whole cell lysates.



14-3-3 ε (T-16): sc-1020. Western blot analysis of 14-3-3 ε expression in Caki-1 whole cell lysate.

SELECT PRODUCT CITATIONS

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2. Liang, S., et al. 2009. Isoform-specific expression and characterization of 14-3-3 proteins in human glioma tissues discovered by stable isotope labeling with amino acids in cell culture-based proteomic analysis. Proteomics Clin. Appl. 3: 743-753.
3. Liang, X., et al. 2010. AS160 modulates aldosterone-stimulated epithelial sodium channel forward trafficking. Mol. Biol. Cell 21: 2024-2033.
4. Drobic, B., et al. 2010. Promoter chromatin remodeling of immediate-early genes is mediated through H3 phosphorylation at either serine 28 or 10 by the MSK1 multi-protein complex. Nucleic Acids Res. 38: 3196-3208.
5. Nakamura, T., et al. 2010. The PX-RICS-14-3-3 ζ/θ complex couples N-cadherin-β-catenin with dynein-dynactin to mediate its export from the endoplasmic reticulum. J. Biol. Chem. 285: 16145-16154.
6. Zhong, J., et al. 2011. The interactome of a PTB domain-containing adapter protein, Odin, revealed by SILAC. J. Proteomics 74: 294-303.
7. Sorokina, E.M., et al. 2011. Intracellular targeting of peroxiredoxin 6 to lysosomal organelles requires MAPK activity and binding to 14-3-3ε. Am. J. Physiol., Cell Physiol. 300: C1430-C1441.
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