

14-3-3 β (A-15): sc-17288

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: YWHAB (human) mapping to 20q13.12; Ywhab (mouse) mapping to 2 H3.

SOURCE

14-3-3 β (A-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of 14-3-3 β of human 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-17288 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

14-3-3 β (A-15) is recommended for detection of 14-3-3 β of mouse, rat and human 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), 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).

14-3-3 β (A-15) is also recommended for detection of 14-3-3 β in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for 14-3-3 siRNA (h): sc-29186, 14-3-3 β siRNA (m): sc-29187, 14-3-3 β shRNA Plasmid (h): sc-29186-SH, 14-3-3 β shRNA Plasmid (m): sc-29187-SH, 14-3-3 β shRNA (h) Lentiviral Particles: sc-29186-V and 14-3-3 β shRNA (m) Lentiviral Particles: sc-29187-V.

Molecular Weight of 14-3-3 β : 30 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, K-562 whole cell lysate: sc-2203 or A-431 whole cell lysate: sc-2201.

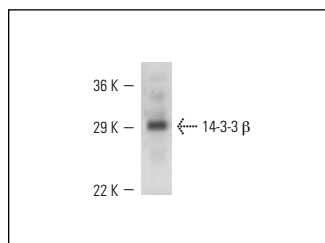
STORAGE

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

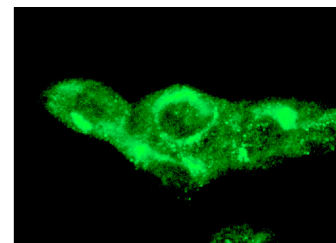
RESEARCH USE

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

DATA



14-3-3 β (A-15): sc-17288. Western blot analysis of 14-3-3 β expression in SK-N-MC whole cell lysate.



14-3-3 β (A-15): sc-17288. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Zanusso, G., et al. 2005. Phosphorylated 14-3-3 ζ protein in the CSF of neuroleptic-treated patients. *Neurology* 64: 1618-1620.
- Piubelli, C., et al. 2006. Searching for markers of Creutzfeldt-Jakob disease in cerebrospinal fluid by two-dimensional mapping. *Proteomics* 6: S256-S261.
- Shirakashi, Y., et al. 2006. α -Synuclein is colocalized with 14-3-3 and synphilin-1 in A53T transgenic mice. *Acta Neuropathol.* 112: 681-689.
- Di Fede, G., et al. 2007. The ϵ isoform of 14-3-3 protein is a component of the prion protein amyloid deposits of Gerstmann-Straussler-Scheinker disease. *J. Neuropathol. Exp. Neurol.* 66: 124-130.
- Mangin, P.H., et al. 2009. Identification of five novel 14-3-3 isoforms interacting with the GPIb-IX complex in platelets. *J. Thromb. Haemost.* 7: 1550-1555.
- Lau, J.M. and Muslin, A.J. 2009. Analysis of 14-3-3 family member function in *Xenopus* embryos by microinjection of antisense morpholino oligos. *Methods Mol. Biol.* 518: 31-41.
- Liang, X., et al. 2010. AS160 modulates aldosterone-stimulated epithelial sodium channel forward trafficking. *Mol. Biol. Cell* 21: 2024-2033.
- 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.
- Inglés-Esteve, J., et al. 2012. Inhibition of specific NF κ B activity contributes to the tumor suppressor function of 14-3-3 σ in Breast Cancer. *PLoS ONE* 7: e38347.

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Try **14-3-3 β (A-6): sc-25276** or **14-3-3 β (60C10): sc-59419**, our highly recommended monoclonal alternatives to 14-3-3 β (A-15). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **14-3-3 β (A-6): sc-25276**.