

pan 14-3-3 (FL-246): sc-13959

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.

REFERENCES

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- Megidish, T., et al. 1998. A novel sphingosine-dependent protein kinase (SDK1) specifically phosphorylates certain isoforms of 14-3-3 protein. *J. Biol. Chem.* 273: 21834-21845.

SOURCE

pan 14-3-3 (FL-246) is a rabbit polyclonal antibody raised against amino acids 1-246 representing full length 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.

APPLICATIONS

pan 14-3-3 (FL-246) is recommended for detection of pan 14-3-3 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).

pan 14-3-3 (FL-246) is also recommended for detection of pan 14-3-3 in additional species, including equine, bovine and porcine.

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

Positive Controls: SK-N-SH cell lysate: sc-2410, PC-12 cell lysate: sc-2250 or HeLa whole cell lysate: sc-2200.

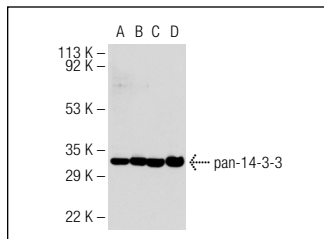
RESEARCH USE

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

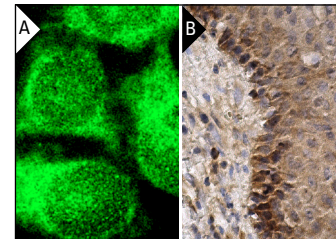
STORAGE

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

DATA



pan-14-3-3 (FL-246): sc-13959. Western blot analysis of 14-3-3 expression in HeLa (A), SK-N-SH (B) and PC-12 (C) whole cell lysates and mouse cerebellum tissue extract (D).



pan-14-3-3 (FL-246): sc-13959. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing cytoplasmic staining of squamous epithelial cells (B).

SELECT PRODUCT CITATIONS

- Watabe, M., et al. 2004. Rotenone induces apoptosis via activation of Bad in human dopaminergic SH-SY5Y cells. *J. Pharmacol. Exp. Ther.* 311: 948-953.
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- 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.



Try **pan 14-3-3 (B-8): sc-133233** or **pan 14-3-3 (B-11): sc-133232**, our highly recommended monoclonal alternatives to pan-14-3-3 (FL-246). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **pan 14-3-3 (B-8): sc-133233**.