

14-3-3 γ (KC21): sc-59421

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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- Hermeking, H. 2003. The 14-3-3 cancer connection. *Nat. Rev. Cancer* 3: 931-943.
- Paul, A.L., et al. 2005. Isoform-specific subcellular localization among 14-3-3 proteins in *Arabidopsis* seems to be driven by client interactions. *Mol. Biol. Cell* 16: 1735-1743.

CHROMOSOMAL LOCATION

Genetic locus: YWHAG (human) mapping to 7q11.23, Ywhag (mouse) mapping to 5 G2.

SOURCE

14-3-3 γ (KC21) is a mouse monoclonal antibody raised against the N-terminus of 14-3-3 γ of human origin.

PRODUCT

Each vial contains 50 μ g IgG_{2a} in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

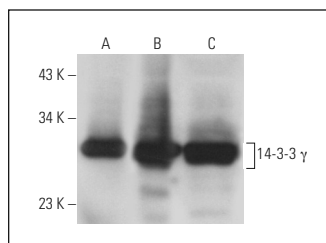
14-3-3 γ (KC21) is recommended for detection of 14-3-3 γ where the N-terminal Met is removed, resulting in an acetylated N-terminal Valine of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)]; not recommended for detection of unprocessed (non-modified) 14-3-3 γ .

Suitable for use as control antibody for 14-3-3 γ siRNA (h): sc-29582, 14-3-3 γ siRNA (m): sc-29584, 14-3-3 γ shRNA Plasmid (h): sc-29582-SH, 14-3-3 γ shRNA Plasmid (m): sc-29584-SH, 14-3-3 γ shRNA (h) Lentiviral Particles: sc-29582-V, 14-3-3 γ shRNA (m) Lentiviral Particles: sc-29584-V.

Molecular Weight of 14-3-3 γ : 33 kDa.

Positive Controls: 14-3-3 γ (h): 293T Lysate: sc-113231, K-562 whole cell lysate: sc-2203 or U-937 cell lysate: sc-2239.

DATA



14-3-3 γ (KC21): sc-59421. Western blot analysis of 14-3-3 γ expression in non-transfected 293T: sc-117752 (A), human 14-3-3 γ transfected 293T: sc-113231 (B) and K-562 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Lee, T.G., et al. 2017. Fhit, a tumor suppressor protein, induces autophagy via 14-3-3 τ in non-small cell lung cancer cells. *Oncotarget* 8: 31923-31937.

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.



See **pan 14-3-3 (B-8): sc-133233** for pan 14-3-3 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647.