SANTA CRUZ BIOTECHNOLOGY, INC.

Dok-3 (M-214): sc-33797

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Dok-1, Dok-2 and Dok-3 are members of a class of "docking" proteins which contain multiple tyrosine residues and putative SH2 binding sites. Dok-1 associates with the Ras GTPase activating protein (Ras GAP) upon tyrosine phosphorylation. Dok-2 (also designated p56 Dok) has also been identified as a potential mediator of the effects of p210 Bcr-Abl. Dok-3 is an adapter involved in the recruitment of inhibitory molecules and is highly expressed in B cells and macrophages. Immunoreceptor-mediated cellular activation induces tyrosine phosphorylation of Dok-3. Upon phosphorylation, Dok-3 binds to 5' inositol phosphatase SHIP and the protein tyrosine kinase Csk. Dok-3 may play a significant role in the negative regulation of immunoreceptor signaling in hemopoietic cells.

REFERENCES

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2. Mayer, B.J., Hirai, H. and Sakai, R. 1995. Evidence that SH2 domains promote processive phosphorylation by protein-tyrosine kinases. Curr. Biol. 5: 296-305.
3. Carpino, N., Wisniewski, D., Strife, A., Marshak, D., Kobayashi, R., Stillman, B. and Clarkson, B. 1997. p62Dok: a constitutively tyrosine-phosphorylated, GAP-associated protein in chronic myelogenous leukemia progenitor cells. Cell 88: 197-204.
4. Yamanashi, Y. and Baltimore, D. 1997. Identification of the Abl- and Ras GAP-associated 62 kDa protein as a docking protein, Dok. Cell 88: 205-211.
5. Di Cristofano, A., Carpino, N., Dunant, N., Friedland, G., Kobayashi, R., Strife, A., Wisniewski, D., Clarkson, B., Pandolfi, P.P. and Resh, M.D. 1998. Molecular cloning and characterization of p56 Dok-2 defines a new family of Ras GAP-binding proteins. J. Biol. Chem. 273: 4827-4830.

CHROMOSOMAL LOCATION

Genetic locus: DOK3 (human) mapping to 5q35.3; Dok3 (mouse) mapping to 13 B1.

SOURCE

Dok-3 (M-214) is a rabbit polyclonal antibody raised against amino acids 231-444 mapping at the C-terminus of Dok-3 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Dok-3 (M-214) is recommended for detection of Dok-3 of mouse, rat and, to a lesser extent, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Dok-3 siRNA (h): sc-44762, Dok-3 siRNA (m): sc-35213, Dok-3 shRNA Plasmid (h): sc-44762-SH, Dok-3 shRNA Plasmid (m): sc-35213-SH, Dok-3 shRNA (h) Lentiviral Particles: sc-44762-V and Dok-3 shRNA (m) Lentiviral Particles: sc-35213-V.

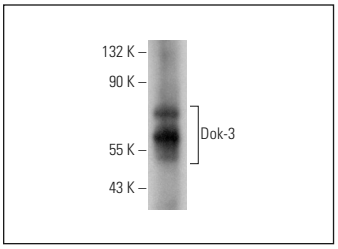
Molecular Weight of Dok-3: 58-62 kDa.

Positive Controls: rat spleen extract: sc-2397, RAW 264.7 whole cell lysate: sc-2211 or mouse spleen extract: sc-2391.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Dok-3 (M-214): sc-33797. Western blot analysis of Dok-3 expression in mouse PBL whole cell lysate.

RESEARCH USE

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