SANTA CRUZ BIOTECHNOLOGY, INC.

Dok-3 (E-2): sc-271132

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

1. Wisniewski, D., et al. 1994. A 62-kilodalton tyrosine phosphoprotein constitutively present in primary chronic phase chronic myelogenous leukemia enriched lineage negative blast populations. Leukemia 8: 688-693.
2. Mayer, B.J., et al. 1995. Evidence that SH2 domains promote processive phosphorylation by protein-tyrosine kinases. Curr. Biol. 5: 296-305.
3. Carpino, N., et al. 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 rasGAP-associated 62 kDa protein as a docking protein, Dok. Cell 88: 205-211.
5. Di Cristofano, A., et al. 1998. Molecular cloning and characterization of $p56^{dok-2}$ defines a new family of RasGAP-binding proteins. J. Biol. Chem. 273: 4827-4830.
6. Cong, F., et al. 1999. Characterization of a novel member of the DOK family that binds and modulates Abl signaling. Mol. Cell. Biol. 19: 8314-8325.

CHROMOSOMAL LOCATION

Genetic locus: Dok3 (mouse) mapping to 13 B1.

SOURCE

Dok-3 (E-2) is a mouse monoclonal 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_1 kappa light chain 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

Dok-3 (E-2) is recommended for detection of Dok-3 of mouse origin by Western Blotting (starting dilution 1:100, 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 (m): sc-35213, Dok-3 shRNA Plasmid (m): sc-35213-SH and Dok-3 shRNA (m) Lentiviral Particles: sc-35213-V.

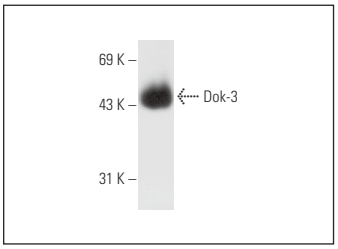
Molecular Weight of Dok-3: 58-62 kDa.

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

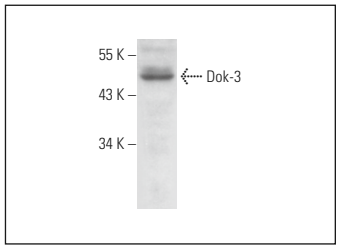
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Dok-3 (E-2): sc-271132. Western blot analysis of Dok-3 expression in RAW 264.7 whole cell lysate.



Dok-3 (E-2): sc-271132. Western blot analysis of Dok-3 expression in NAMALWA whole cell lysate.

RESEARCH USE

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