

Dok-3 (F-7): sc-390007

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 kDa 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. p62^{dok}: 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.

CHROMOSOMAL LOCATION

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

SOURCE

Dok-3 (F-7) is a mouse monoclonal antibody raised against amino acids 291-496 mapping at the C-terminus of Dok-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Dok-3 (F-7) is available conjugated to agarose (sc-390007 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390007 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390007 PE), fluorescein (sc-390007 FITC), Alexa Fluor® 488 (sc-390007 AF488), Alexa Fluor® 546 (sc-390007 AF546), Alexa Fluor® 594 (sc-390007 AF594) or Alexa Fluor® 647 (sc-390007 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390007 AF680) or Alexa Fluor® 790 (sc-390007 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

Dok-3 (F-7) is recommended for detection of Dok-3 of mouse, rat and human 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), 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).

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.

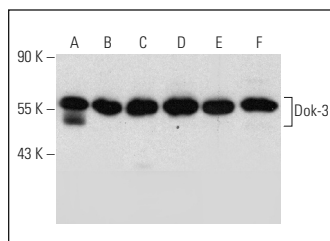
Molecular Weight of Dok-3: 58-62 kDa.

Positive Controls: I-11.15 whole cell lysate: sc-364370, Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

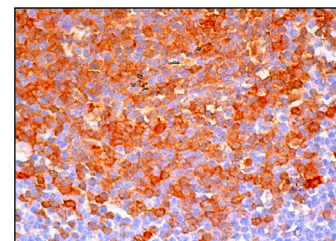
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Dok-3 (F-7): sc-390007. Western blot analysis of Dok-3 expression in K-562 (A), Jurkat (B), 3T3-L1 (C), I-11.15 (D), RIN-m5F (E) and C6 (F) whole cell lysates.



Dok-3 (F-7): sc-390007. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic and membrane staining of cells in germinal center.

SELECT PRODUCT CITATIONS

1. Jiang, X., et al. 2019. Interplay between HGAL and Grb2 proteins regulates B-cell receptor signaling. *Blood Adv.* 3: 2286-2297.

STORAGE

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