

# Dok-3 (H-5): sc-373885

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Dok-3 (H-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 361-399 within an internal region of Dok-3 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-373885 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

Dok-3 (H-5) is recommended for detection of Dok-3 of mouse and rat 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.

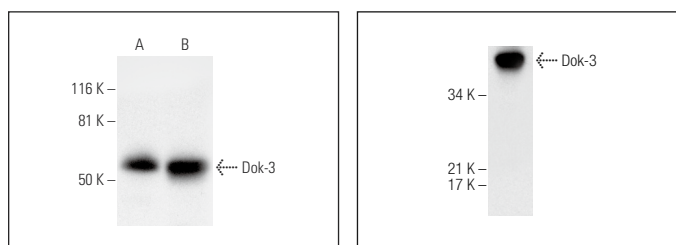
Molecular Weight of Dok-3: 58-62 kDa.

Positive Controls: SP2/0 whole cell lysate: sc-364795, mouse spleen extract: sc-2391 or I-11.15 whole cell lysate: sc-364370.

## 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 (H-5): sc-373885. Western blot analysis of Dok-3 expression in SP2/0 (A) and I-11.15 (B) whole cell lysates.

Dok-3 (H-5): sc-373885. Western blot analysis of Dok-3 expression in mouse spleen tissue extract.

## SELECT PRODUCT CITATIONS

1. Loh, J.T., et al. 2019. Dok-3-protein phosphatase 1 interaction attenuates Card9 signaling and neutrophil-dependent antifungal immunity. *J. Clin. Invest.* 129: 2717-2729.
2. Loh, J.T., et al. 2022. Dok-3 restrains neutrophil production of calprotectin during TLR4 sensing of SARS-CoV-2 spike protein. *Front. Immunol.* 13: 996637.
3. Kim, J.H., et al. 2022. Polyamine oxidase expression is downregulated by 17β-estradiol via estrogen receptor 2 in human MCF-7 breast cancer cells. *Int. J. Mol. Sci.* 23: 7521.

## 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](http://www.scbt.com) for detailed protocols and support products.