

# Dok-2 (E-10): sc-17830



The Power to Question

## BACKGROUND

Dok-1 associates with the Ras GTPase activating protein (Ras GAP) upon tyrosine phosphorylation. Evidence suggests that p62 Dok-1 is a substrate of the constitutive tyrosine kinase activity of p210 Bcr-Abl, a fusion protein caused by the t(9;22) translocation and associated with chronic myelogenous leukemia. Dok-1, as well as the tyrosine kinase substrates IRS-1 and Cas, is a member of a class of "docking" proteins which contain multiple tyrosine residues and putative SH2 binding sites. Dok-1 is suspected to be the substrate phosphorylated in response to stimulation by a number of growth factors, including PDGF, VEGF, Insulin and IGF. Dok-2 (also designated p56 Dok) has also been identified as a potential mediator of the effects of p210 Bcr-Abl.

## CHROMOSOMAL LOCATION

Genetic locus: DOK2 (human) mapping to 8p21.3.

## SOURCE

Dok-2 (E-10) is a mouse monoclonal antibody raised against amino acids 221-412 mapping at the C-terminus of Dok-2 of human 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.

Dok-2 (E-10) is available conjugated to agarose (sc-17830 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17830 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17830 PE), fluorescein (sc-17830 FITC), Alexa Fluor® 488 (sc-17830 AF488), Alexa Fluor® 546 (sc-17830 AF546), Alexa Fluor® 594 (sc-17830 AF594) or Alexa Fluor® 647 (sc-17830 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17830 AF680) or Alexa Fluor® 790 (sc-17830 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## STORAGE

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

## APPLICATIONS

Dok-2 (E-10) is recommended for detection of Dok-2 of 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), 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-2 siRNA (h): sc-35211, Dok-2 shRNA Plasmid (h): sc-35211-SH and Dok-2 shRNA (h) Lentiviral Particles: sc-35211-V.

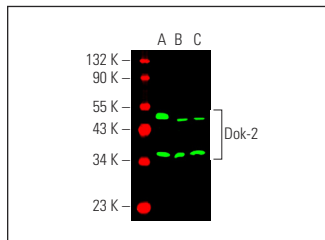
Molecular Weight of Dok-2: 56 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, MEG-01 cell lysate: sc-2283 or HEL 92.1.7 cell lysate: sc-2270.

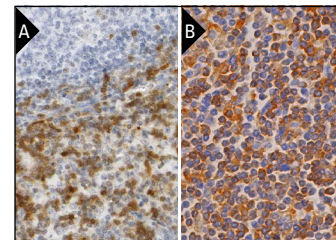
## RECOMMENDED SUPPORT REAGENTS

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-2 (E-10) Alexa Fluor® 680: sc-17830 AF680. Direct near-infrared western blot analysis of Dok-2 expression in MEG-01 (A), HEL 92.1.7 (B) and THP-1 (C) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 790: sc-516731.



Dok-2 (E-10): sc-17830. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of paracortex cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp (B).

## SELECT PRODUCT CITATIONS

- Dong, S., et al. 2006. T cell receptor for antigen induces linker for activation of T cell-dependent activation of a negative signaling complex involving Dok-2, SHIP-1, and GRB2. *J. Exp. Med.* 203: 2509-2518.
- Berger, A.H., et al. 2010. Identification of DOK genes as lung tumor suppressors. *Nat. Genet.* 42: 216-223.
- Miyagaki, H., et al. 2012. Dok2 as a marker of poor prognosis of patients with gastric adenocarcinoma after curative resection. *Ann. Surg. Oncol.* 19: 1560-1567.
- Berger, A.H., et al. 2013. Dok2 inhibits EGFR-mutated lung adenocarcinoma. *PLoS ONE* 8: e79526.
- Wen, X., et al. 2015. Expression and significance of Dok2 in colorectal cancer. *Oncol. Lett.* 9: 241-244.
- Huang, J., et al. 2017. Co-expression and significance of Dok2 and Ras p21 protein activator 1 in breast cancer. *Oncol. Lett.* 14: 5386-5392.

## RESEARCH USE

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

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