

Dok-2 (A-5): sc-271781

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.

REFERENCES

1. Myers, M.G., et al. 1994. The IRS-1 signaling system. *Trends Biochem. Sci.* 19: 289-293.
2. 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.
3. Mayer, B.J., et al. 1995. Evidence that SH2 domains promote processive phosphorylation by protein-tyrosine kinases. *Curr. Biol.* 5: 296-305.
4. Guo, D., et al. 1995. Vascular endothelial cell growth factor promotes tyrosine phosphorylation of mediators of signal transduction that contain SH2 domains. Association with endothelial cell proliferation. *J. Biol. Chem.* 270: 6729-6733.
5. Holgado, M.M., et al. 1996. A Grb2-associated docking protein in EGF- and Insulin-receptor signalling. *Nature* 379: 560-564.
6. Carpino, N., et al. 1997. p62 Dok: a constitutively tyrosine-phosphorylated, GAP-associated protein in chronic myelogenous leukemia progenitor cells. *Cell* 88: 197-204.
7. Yamanashi, Y., et al. 1997. Identification of the Abl- and Ras GAP- associated 62 kDa protein as a docking protein, Dok. *Cell* 88: 205-211.
8. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Dok-2 (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 377-409 at the C-terminus of Dok-2 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.

Blocking peptide available for competition studies, sc-271781 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Dok-2 (A-5) is recommended for detection of Dok-2 of 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) 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.

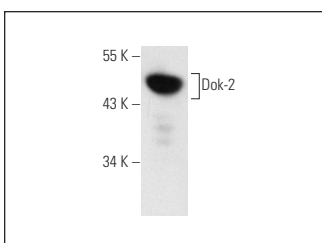
Molecular Weight of Dok-2: 56 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or MEG-01 cell lysate: sc-2283.

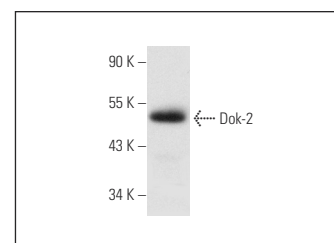
RECOMMENDED SUPPORT REAGENTS

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-2 (A-5): sc-271781. Western blot analysis of Dok-2 expression in Jurkat whole cell lysate.



Dok-2 (A-5): sc-271781. Western blot analysis of Dok-2 expression in MEG-01 whole cell lysate.

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 for detailed protocols and support products.