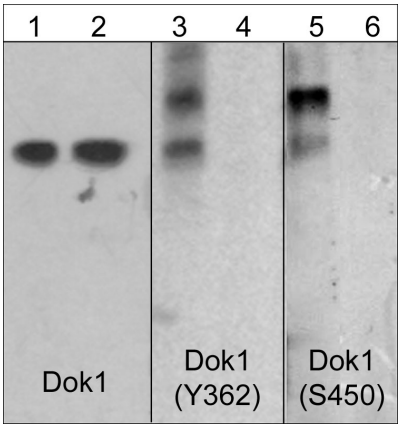
Dok1 (Ser-450), phospho-specific

Cat. # DP2181
Host Rabbit Polyclonal
Size 100 µl

Background:

Doks are a family of adaptor proteins that recruit SH2-containing molecules involved in various cell signaling pathways. Six Dok proteins (Dok1 to Dok6) have been identified and each has an N-terminal pleckstrin homology domain, a central phosphotyrosine binding domain, and a C-terminal region containing multiple tyrosine residues. When phosphorylated, these tyrosines can serve as docking sites for SH2 domain-containing proteins. Dok1 (p62dok) has been shown to bind Ras-GAP, Nck, and Csk. Several tyrosine phosphorylation sites have been identified for Dok1. One site, Tyr-362 (Tyr-361 mouse), is phosphorylated by c-Abl, is required for Nck binding, and may be critical for filopodia formation during fibroblast spreading on fibronectin. Alternatively, Dok1 activity is also regulated by serine phosphorylation. IκB Kinase β phosphorylates several serine sites including Ser-450 *in vitro*, and TNFα, IL-1, and radiation treatment lead to phosphorylation of Ser-443, Ser-446, and Ser-450 *in vivo*. Phosphorylation of these serine sites may be required for Dok-mediated inhibition of MAPK signaling and stimulation of cell motility.



Western blot image of Jurkat cells stimulated with calyculin A (100 nM, 30 min) (lanes 1-6) followed by lambda phosphatase (lanes 2 & 6) or alkaline phosphatase (lane 4) treatment. The blots were probed with anti-Dok1 (lanes 1 & 2), anti-Dok1 (Tyr-362) (lanes 3 & 4), and anti-Dok1 (Ser -450) (lanes 5 & 6).

References

Noguchi, T. et al. (1999) EMBOJ 18(7):1748.
Kashige, N. et al. (2000) Proc. Nat. Acad. Sci. 97(5):2093.
Lee, S. et al. (2004) Proc. Nat. Acad. Sci. 101(50):17416.
Woodring, P.J. (2004) J Cell Biol. 165(4):493.

Immunogen:

Phospho-Dok1 (Ser-450) synthetic peptide (coupled to KLH) corresponds to amino acids surrounding serine 450 in human Dok1. This sequence is conserved in Dok1 from rat (Ser-449) and mouse (Ser-451). The site is not conserved in other Dok family members.

Buffer and Storage:

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Do not aliquot. Stable for 1 year.

Applications:

WB	1:1000
ELISA	1:2000

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1hour at room temperature.

Related Products:

DP2241	Dok1 (Tyr-362), phospho-specific [Conserved site] Rabbit Polyclonal
DX2245	phospho-Dok1 (Tyr-362) Peptide
DX2305	unphosphorylated Dok1 (Tyr-362) Peptide
DX2185	phospho-Dok1 (Ser-450) Peptide
DX2275	unphosphorylated Dok1 (Ser-450) Peptide

Specificity:

This antibody was cross-adsorbed to an unphosphorylated Dok1 (Ser-450) peptide before affinity purification using phospho-Dok1 (Ser-450) peptide. The purified antibody detects a band at 62 kDa* corresponding to Dok1 in western blots of human Jurkat cells, but does not detect this band after lambda phosphatase treatment. Similar to Dok1 (Tyr-362) antibody, this antibody also detects an 80 kDa band that has not been identified.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

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