

# phospho-Dok1 (Tyr-362) Peptide

Cat. # DX2245

Size 50 µg

## **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.

## **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.

## **Peptide Sequence:**

Phospho-Dok1 (Tyr-362) synthetic peptide corresponding to amino acids surrounding tyrosine 362 in human Dok1. This sequence is conserved in Dok1 from rat and mouse (Tyr-361), and has high homology to Dok2 (Tyr-337). The site is not conserved in other Dok family members.

## **Buffer and Storage:**

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide.  
Store at -20°C. Stable for 1 year.

## **Applications:**

Blocking 1:1000

ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody.  
Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.  
ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

## **Specificity:**

This peptide is specifically recognized by Dok1 (Tyr-362) antibody (DP2241) in ELISA, and has been shown to block the reactivity of DP2241 in Western blot and is recommended for blocking in immunocytochemistry.

## **Related Products:**

DP2241 Dok1 (Tyr-362), phospho-specific [Conserved site] Rabbit Polyclonal  
DX2305 unphosphorylated Dok1 (Tyr-362) Peptide  
DP2181 Dok1 (Ser-450), phospho-specific Rabbit Polyclonal  
DX2185 phospho-Dok1 (Ser-450) Peptide  
DX2275 unphosphorylated Dok1 (Ser-450) Peptide

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