

phospho-Dok1 (Ser-450) Peptide

Cat. # DX2185

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 (Ser-450) synthetic peptide 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:

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 (Ser-450) antibody (DP2181) in ELISA, and has been shown to block the reactivity of DP2181 in Western blot and is recommended for blocking in immunocytochemistry.

Related Products:

DP2181 Dok1 (Ser-450), phospho-specific Rabbit Polyclonal
DX2275 unphosphorylated Dok1 (Ser-450) Peptide
DP2241 Dok1 (Tyr-362), phospho-specific [Conserved site] Rabbit Polyclonal
DX2245 phospho-Dok1 (Tyr-362) Peptide
DX2305 unphosphorylated Dok1 (Tyr-362) Peptide

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www.ecmbiosciences.com
telephone: 859-879-2075
toll-free: 1-800-859-8202
tech: info@ecmbiosciences.com

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