

VEGF Receptor 2 Control Proteins



150 µl
(10 western blots)

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For Research Use Only. Not For Use In Diagnostic Procedures.

Product Includes	Product #	Quantity
VEGF Receptor 2 Control Protein (Nonphosphorylated)	65094	150 ul
VEGF Receptor 2 Control Protein (Phosphorylated)	80975	150 ul

Background: Vascular endothelial growth factor receptor 2 (VEGFR2, KDR, Flk-1) is a major receptor for VEGF-induced signaling in endothelial cells. Upon ligand binding, VEGFR2 undergoes autophosphorylation and becomes activated (1). Major autophosphorylation sites of VEGFR2 are located in the kinase insert domain (Tyr951/996) and in the tyrosine kinase catalytic domain (Tyr1054/1059) (2). Activation of the receptor leads to rapid recruitment of adaptor proteins, including Shc, GRB2, PI3 kinase, NCK, and the protein tyrosine phosphatases SHP-1 and SHP-2 (3). Phosphorylation at Tyr1212 provides a docking site for GRB2 binding and phospho-Tyr1175 binds the p85 subunit of PI3 kinase and PLCγ, as well as Shb (1,4,5). Signaling from VEGFR2 is necessary for the execution of VEGF-stimulated proliferation, chemotaxis and sprouting, as well as survival of cultured endothelial cells *in vitro* and angiogenesis *in vivo* (6-8).

Description: *VEGFR2 Control Protein (Nonphosphorylated):* Nonphosphorylated human VEGFR2 (Val789-Val1356) fusion protein treated with λ phosphatase serves as a negative control. Supplied in SDS Sample Buffer.

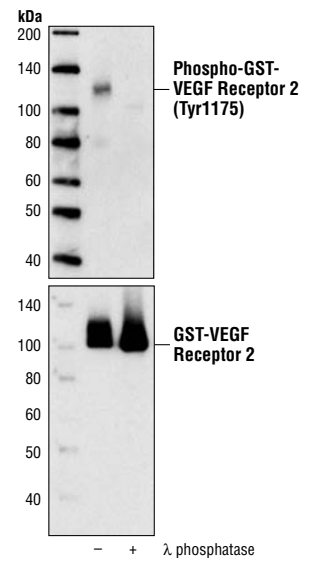
VEGFR2 Control Protein (Phosphorylated): Phosphorylated human VEGFR2 (Val789-Val1356) fusion protein serves as a positive control. Supplied in SDS Sample Buffer.

Molecular Weight: 110 kDa

Directions for Use: Boil for 3 minutes prior to use. Load 15 µl (20 ng) of phosphorylated and nonphosphorylated VEGF Receptor 2 Control Proteins per lane.

Background References:

- (1) Meyer, M. et al. (1999) *EMBO J* 18, 363-74.
- (2) Dougher-Vermazen, M. et al. (1994) *Biochem Biophys Res Commun* 205, 728-38.
- (3) Kroll, J. and Waltenberger, J. (1997) *J Biol Chem* 272, 32521-7.
- (4) Takahashi, T. et al. (2001) *EMBO J* 20, 2768-78.
- (5) Holmqvist, K. et al. (2004) *J Biol Chem* 279, 22267-75.
- (6) Karkkainen, M.J. and Petrova, T.V. (2000) *Oncogene* 19, 5598-605.
- (7) Rahimi, N. et al. (2000) *J Biol Chem* 275, 16986-92.
- (8) Claesson-Welsh, L. (2003) *Biochem Soc Trans* 31, 20-4.



Western blot analysis of recombinant human GST-VEGF Receptor 2 (Val789-Val1356), untreated or λ phosphatase-treated, using Phospho-VEGF Receptor 2 (Tyr1175) Antibody #2478 (upper), VEGF Receptor 2 Antibody # 2479 (lower).

Entrez-Gene ID #3791
UniProt Acc. #P35968

Storage: Supplied in SDS Sample Buffer: 62.5 mM Tris-HCl (pH 6.8 at 25°C), 2% w/v SDS, 10% glycerol, 50 mM DTT, 0.01% w/v phenol red or bromophenol blue. Store at -20°C or at -80°C for long term storage.

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