

VEGFR Phospho-Regulation Antibody Sampler Kit

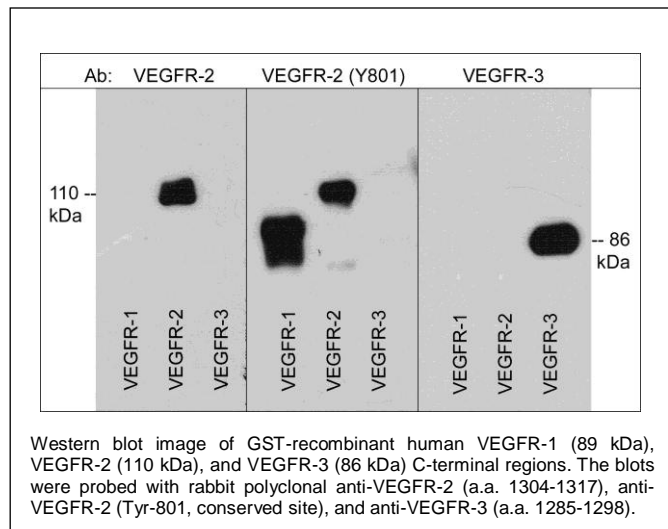
Catalog # VK6090

Kit Summary:

The VEGFR phospho-regulation antibody sampler kit can be used to detect the level of phosphorylation of VEGFR-2 (Tyr-801) relative to the total expression level of VEGFR-2. In addition, the anti-VEGFR-2 (Tyr-801) can be used to detect phosphorylation of the conserved sites in VEGFR-1 (Tyr-794) and VEGFR-3 (Tyr-812). The kit also includes a VEGFR-3 antibody, as well as peptides for antibody blocking experiments.

Background:

Vascular endothelial growth factor receptor-2 (VEGFR-2/Flk-1/KDR) is the primary receptor for VEGF in endothelial cells. Other VEGFR family members, VEGFR-1 (Flt-1) and VEGFR-3 (Flt-4), can also transduce the intracellular signals of VEGF. However, the role of VEGFR-1 is observed mainly during embryonic angiogenesis and VEGFR-3 signaling may be restricted to specific types of endothelial cells. Major autophosphorylation sites of VEGFR-2 are located in the kinase insert domain (Tyr-951/996) and in the tyrosine kinase catalytic domain (Tyr-1054/1059). Other sites, Tyr-1175 and Tyr-1212 provide docking sites for downstream signaling molecules. Activation of VEGFR-2 also phosphorylates Tyr-801, leading to PI3-kinase-Akt activation and increases in endothelial nitric oxide synthase activity. Phosphorylation of multiple sites in VEGFR-2 is required for downstream activation of several signaling pathways that control proliferation, chemotaxis, and sprouting during angiogenesis.



Background References:

Dougher-Vermazen et al. (1994) *Biochem Biophys Res Commun* 205:728.
Meyer, M. et al. (1999) *EMBO J.* 18:363.
Robinson, C.J. and Stringer, S.E. (2001) *J. Cell Sci.* 114:853.
Garcia Blanes, M. et al. (2007) *J Biol. Chem.* 282(14):10660.
Kiselyov, A. et al. (2007) *Expert Opin. Investig. Drugs* 16(1):83.

Kit Components:

Catalog#	Description	Type	Size	Applications	Species Reactivity	MW (kDa)
VP2871	VEGFR-2 (a.a.1304-1317)	Rabbit pAb	50 µl	WB, E	H, R, M	150-230
VP2921	VEGFR-2 (Tyr-801), phospho-specific	Rabbit pAb	50 µl	WB, E	H, R, M	150-230
VP2941	VEGFR-3 (a.a.1285-1298)	Rabbit pAb	50 µl	WB, E	H, R, M	170
VX2875	VEGFR-2 (a.a.1304-1317)	Peptide	50µg	AB, E		
VX2925	Phospho-VEGFR-2 (Tyr-801)	Peptide	50µg	AB, E		
VX2945	VEGFR-3 (a.a.1285-1298)	Peptide	50µg	AB, E		

Applications: WB = western blot, E = ELISA, AB = Antibody Blocking. Species: H = Human, R = Rat, M = Mouse.

Buffers and Storage:

Rabbit polyclonal, affinity-purified antibodies are each supplied in phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Blocking Peptides are supplied in phosphate-buffered saline and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

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