

p-Flk-1 (Tyr 951): sc-101821

BACKGROUND

Three cell membrane receptor tyrosine kinases, Flt (also designated VEGF-R1), Flk-1 (also designated VEGF-R2) and Flt-4, putatively involved in the growth of endothelial cells, are characterized by the presence of seven immunoglobulin-like sequences in their extracellular domain. These receptors exhibit high degrees of sequence homology to each other as well as lesser degrees of homology to the class III receptors, including CSF-1/Fms, PDGR, SLFR/Kit and Flt-3/Flk-2. Two members of this receptor class, Flt-1 and Flk-1, have been shown to represent high affinity receptors for vascular endothelial growth factors (VEGFs). In response to VEGF binding, Flk-1 undergoes autophosphorylation in the kinase insert domain on Tyr 951 and Tyr 996 and in the tyrosine kinase catalytic domain on Tyr 1054 and Tyr 1059. Upon activation, Flk-1 recruits several adapter proteins, including Shc, GRB2, Nck and protein tyrosine phosphatases SHP-1 and SHP-2. The mediation of VEGF signaling by Flk-1 promotes proliferation, chemotaxis, prouting and angiogenesis.

CHROMOSOMAL LOCATION

Genetic locus: KDR (human) mapping to 4q12; Kdr (mouse) mapping to 5 C3.3.

SOURCE

p-Flk-1 (Tyr 951) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Tyr 951 of Flk-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

p-Flk-1 (Tyr 951) is recommended for detection of Tyr 951 phosphorylated Flk-1 of human origin, correspondingly phosphorylated Tyr 949 Flk-1 of mouse origin and correspondingly phosphorylated Tyr 947 Flk-1 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Flk-1 siRNA (h): sc-29318, Flk-1 siRNA (m): sc-35390, Flk-1 shRNA Plasmid (h): sc-29318-SH, Flk-1 shRNA Plasmid (m): sc-35390-SH, Flk-1 shRNA (h) Lentiviral Particles: sc-29318-V and Flk-1 shRNA (m) Lentiviral Particles: sc-35390-V.

Molecular Weight of immature p-Flk-1: 150 kDa.

Molecular Weight of intermediate glycosylated p-Flk-1: 200 kDa.

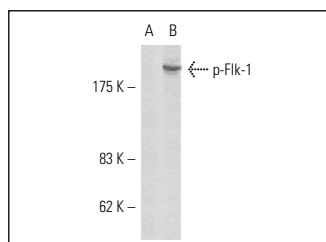
Molecular Weight of mature glycosylated p-Flk-1: 230 kDa.

Positive Controls: SK-OV-3 whole cell lysate.

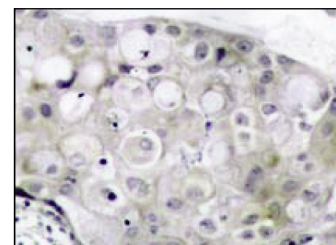
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Western blot analysis of phosphorylated Flk-1 expression in SKOV3 whole cell lysates. Blots were probed with p-Flk-1 (Tyr 951): sc-101821 preincubated with cognate phosphorylated peptide (A) and p-Flk-1 (Tyr 951): sc-101821 (B).



p-Flk-1 (Tyr 951): sc-101821. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Iacob, D., et al. 2008. Decorin-mediated inhibition of proliferation and migration of the human trophoblast via different tyrosine kinase receptors. *Endocrinology* 149: 6187-6197.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.