Anti-VEGF Antibody

ER30607

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IF-Cell, IHC-P, FC
Molecular Wt:	Predicted band size: 27 kDa

Description: Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. Induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis and induces permeabilization of blood vessels. Binds to the FLT1/VEGFR1 and KDR/VEGFR2 receptors, heparan sulfate and heparin. NRP1/Neuropilin-1 binds isoforms VEGF-165 and VEGF-145. Isoform VEGF165B binds to KDR but does not activate downstream signaling pathways, does not activate angiogenesis and inhibits tumor growth. Binding to NRP1 receptor initiates a signaling pathway needed for motor neuron axon guidance and cell body migration, including for the caudal migration of facial motor neurons from rhombomere 4 to rhombomere 6 during embryonic development.

Immunogen: Synthetic peptide within N-terminal human VEGFA.

Positive control: HeLa cell lysate, SH-SY5Y cell lysate, HUVEC cell lysate, MCF7 cell lysate, U-87 MG cell lysate, K-562 cell lysate, HepG2, HUVEC, human lung carcinoma tissue, Hela.

Subcellular location: Secreted.

Database links: SwissProt: P15692 Human

Recommended Dilutions:

WB	1:5,000
IF-Cell	1:200
IHC-P	1:200
FC	1:100-1:200

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Immunogen affinity purified.

Images

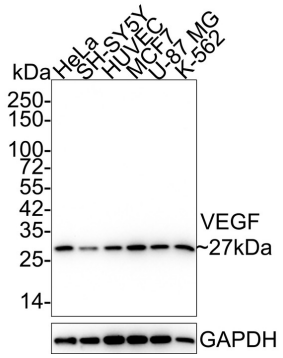

Fig1: Western blot analysis of VEGF on different lysates with Rabbit anti-VEGF antibody (ER30607) at 1/5,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: SH-SY5Y cell lysate
Lane 3: HUVEC cell lysate
Lane 4: MCF7 cell lysate
Lane 5: U-87 MG cell lysate
Lane 6: K-562 cell lysate

Lysates/proteins at 15 µg/Lane.

Predicted band size: 27 kDa
Observed band size: 27 kDa

Exposure time: 39 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ER30607) at 1/5,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

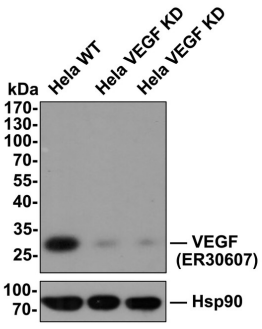

Fig2: All lanes: Western blot analysis of VEGF with anti-VEGF antibody (ER30607) at 1:500 dilution.
Lane 1: Wild-type Hela whole cell lysate (10 µg).
Lane 2/3: VEGF knockdown Hela whole cell lysate (10 µg).

ER30607 was shown to specifically react with VEGF in wild-type Hela cells. Weakened bands were observed when VEGF knockdown samples were tested. Wild-type and VEGF knockdown samples were subjected to SDS-PAGE. Proteins were transferred to a PVDF membrane and blocked with 5% NFDM in TBST for 1 hour at room temperature. The primary antibody (ER30607, 1:500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG-HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

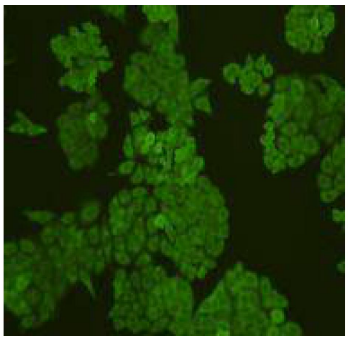

Fig3: ICC staining VEGF in HepG2 cells (green). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

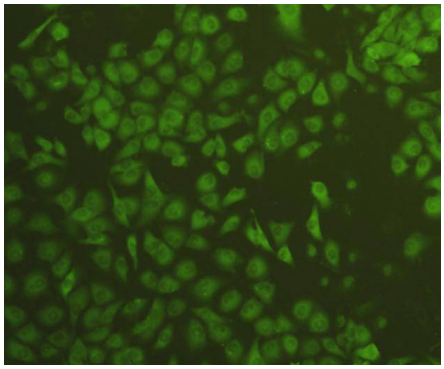

Fig4: ICC staining VEGF in HUVEC cells (green). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

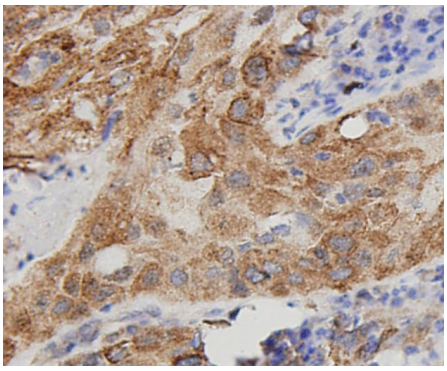

Fig5: Immunohistochemical analysis of paraffin-embedded human lung carcinoma tissue using anti-VEGF antibody. Counter stained with hematoxylin.

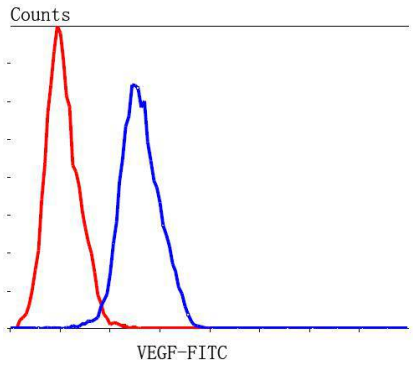

Fig6: Flow cytometric analysis of Hela cells with VEGF antibody at 1/100 dilution (blue) compared with an unlabelled control (cells without incubation with primary antibody; red). Goat anti rabbit IgG (FITC) was used as the secondary antibody.

Background References

1. "Vascular endothelial growth factor induces cyclooxygenase-dependent proliferation of endothelial cells via the VEGF-2 receptor." Murphy J.F., Fitzgerald D.J. FASEB J. 15:1667-1669(2001)
2. "A common polymorphism in the 5'-untranslated region of the VEGF gene is associated with diabetic retinopathy in type 2 diabetes." Awata T., Inoue K., Kurihara S., Ohkubo T., Watanabe M., Inukai K., Inoue I., Katayama S. Diabetes 51:1635-1639(2002)