

Anti-VEGF [G6-31] Standard Size Ab01022-10.0

Isotype and Format: Human IgG1, Kappa

Clone Number: G6-31

Alternative Name(s) of Target: VEGF-A; Vascular endothelial growth factor; vascular permeability factor; VPF; MVCD1

UniProt Accession Number of Target Protein: Q00731

Published Application(s): crystallisation, SPR, Block, ELISA, IF

Published Species Reactivity: Mouse

Immunogen: The anti-mVEGF Fab G6 underwent light chain randomisation by placing stop codons in positions 91-96 in CDR-L3 and an equimolar mix of oligonucleotides designed for mutagenesis was annealed to the mV401 stop template phagemid, followed by mutagenesis and E. coli electroporation. Binding selection was performed with mVEGF immobilised on immunoplates followed by solution-phase sorting with increasing stringency and single-point competitive ELISA to screen for high-affinity clones.

Specificity: G6-31 recognises a VEGF epitope which is conserved between human and mouse VEGF and overlaps with the receptor binding surface. The KD of G6-31 binding to m-VEGF and h-VEGF is ~0.9 and 1.5 nM respectively. Alanine-scanning mutagenesis of solvent-accessible residues of h-VEGF identified 10 residues that result in >4-fold loss in binding affinity including F17, M18, Y21, Q22, Y25, I83, H86, Q89 and I91.

Application Notes: A VEGF phage ELISA was used to measure binding affinity of G6-31 to individual alanine-substituted VEGF mutants versus wild type VEGF. Crystals of G6-31 and the receptor binding fragment of human VEGF have been solved at 3.6 Å (Fuh et al, 2005). Treatment of mice undergoing E2-induced PRLoma with G6-31 was used to block VEGF-A, causing reductions in the Ki-67-positive anterior cells, increases in TUNEL-positive anterior cells, and repair of the microvessel count by CD34-immunohistochemistry (Miyajima et al, 2010). Fluorescence quenching solution assay and SPR have been used to determine K_{on} and K_{off} at 25 degrees celsius (Lee et al, 2004).

Antibody First Published in: Fuh et al Structure-function studies of two synthetic anti-vascular endothelial growth factor Fabs and comparison with the Avastin Fab. J Biol Chem. 2006 Mar 10;281(10):6625-31 [PMID:16373345](#)

Note on publication: Describes the isolation of the antibody from synthetic antibody phage libraries and analysis of VEGF binding.

Product Form

Size: 200 µg Purified antibody.

Purification: Protein A affinity purified

Supplied In: PBS with 0.02% Proclin 300.

Storage Recommendation: Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.