

Active Recombinant Mouse CD117 Protein, His&Avi tagged

Cat. No. KIT-63M Lot. No. (See product label)

SPECIFICATION

Product Overview	CD117 protein dimer contains a CD117 extracellular domain (UniProt# P05532) fused with a proprietary cis-dimer motif followed by a tandem His-Avi tag at the C-terminus.
Species	Mouse
Source	HEK293T
ProteinLength	25-527 aa
Description	<p>Mouse cluster of differentiation 117 (CD117), is a member of the type III receptor tyrosine kinase family. CD117 is also known as KIT, C-Kit, mast/stem cell growth factor receptor (SCFR), KIT proto-oncogene receptor tyrosine kinase, and MASTC. CD117 contains an extracellular domain with five immunoglobulin-like loops, a transmembrane domain, a juxtamembrane domain, and an intracellular domain. CD117 is a Type 1 transmembrane protein, expressed on hematopoietic stem cells, mast cells, melanocytes, germ cells, and interstitial cells of Cajal. CD117 exists as a monomer under normal physical conditions. Upon binding to its natural ligand, stem cell factor (SCF), homodimerization occurs between two CD117 monomers; this homodimerization is essential for its activation. However, oncogenic mutations can cause ligand-independent pathological dimerization and constitutive activation. CD117 is frequently overexpressed or dysregulated in human cancers, including gastrointestinal stromal tumors, acute myeloid leukemia, melanoma, and small cell lung cancer. CD117 is a promising drug</p>

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	target, especially in precision oncology and regenerative medicine. Understanding CD117 dimerization and its activation is crucial for developing targeted therapeutics.
Molecular Mass	132 kDa
Homodimer/Heterodimer	Homodimer
Purity	Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition
Application	Verified Applications: ELISA for CD117-specific antibody and stem cell factor (SCF) ligand protein binding assays. SPR for CD117 and stem SCF ligand protein binding assays Suggested Applications: BLI for CD117-specific antibody and SCF protein binding assays. Animal immunization, RUO.
Storage	At -80 centigrade
Storage Buffer	0.22µm filtered PBS, pH 7.4
Shipping	Frozen Dry Ice

GENE INFORMATION

Gene ID	16590
Gene Name	Kit kit oncogene [<i>Mus musculus</i> (house mouse)]
Official Symbol	16590
Synonyms	KIT; kit oncogene; mast/stem cell growth factor receptor Kit; SCFR; belly-spot;

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	dominant spotting; proto-oncogene c-Kit; spotted sterile male; Steel Factor Receptor; Dominant white spotting; tyrosine-protein kinase Kit; c-kit proto-oncogene protein; proto-oncogene tyrosine-protein kinase Kit; W; Bs; Fdc; Ssm; SCO1; SCO5; SOW3; CD117; c-KIT; Tr-kit; Gsfsc01; Gsfsc05; Gsfscow3;
mRNA Refseq	NM_001122733
Official Symbol 2	Kit
Gene ID 2	16590
Gene Name 2	Kit kit oncogene [Mus musculus (house mouse)]
mRNA Refseq 2	NM_001122733
Protein Refseq 2	NP_001116205
UniProt ID 2	P05532
Bioactivity-Antibody Binding	Immobilized mouse CD117-His-Avi protein dimer at 2 µg/mL (100 µL/well) can bind anti-mouse CD117 monoclonal antibody with half maximal effective concentration (EC50) range of 3-12.1 ng/mL (QC tested).
Bioactivity-Ligand Binding	Immobilized mouse stem cell factor (SCF) at 2 µg/mL (100 µL/well) can bind mouse CD117-His-Avi protein dimer with half maximal effective concentration (EC50) range of 54.7-218.6 ng/mL (QC tested).

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SDS-PAGE

MW: Molecular Weight marker reduced condition NR: CD117 dimer under non-reduced condition

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