

## Active Recombinant Mouse CD117 Protein, His&Avi tagged

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

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <b>Product Overview</b> | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Source</b>           | HEK293T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>ProteinLength</b>    | 25-527 aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>      | <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.                                                                                                                      |
| <b>Molecular Mass</b>        | 132 kDa                                                                                                                                                                                                                                                                                       |
| <b>Homodimer/Heterodimer</b> | Homodimer                                                                                                                                                                                                                                                                                     |
| <b>Purity</b>                | Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition                                                                                                                                                                                                            |
| <b>Application</b>           | 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. |
| <b>Storage</b>               | At -80 centigrade                                                                                                                                                                                                                                                                             |
| <b>Storage Buffer</b>        | 0.22µm filtered PBS, pH 7.4                                                                                                                                                                                                                                                                   |
| <b>Shipping</b>              | Frozen Dry Ice                                                                                                                                                                                                                                                                                |

## GENE INFORMATION

|                        |                                                                                 |
|------------------------|---------------------------------------------------------------------------------|
| <b>Gene ID</b>         | 16590                                                                           |
| <b>Gene Name</b>       | Kit kit oncogene [ Mus musculus (house mouse) ]                                 |
| <b>Official Symbol</b> | 16590                                                                           |
| <b>Synonyms</b>        | 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                         | <a href="#">NM_001122733</a>                                                                                                                                                                                                                                                                               |
| Official Symbol 2                   | <a href="#">Kit</a>                                                                                                                                                                                                                                                                                        |
| Gene ID 2                           | <a href="#">16590</a>                                                                                                                                                                                                                                                                                      |
| Gene Name 2                         | <a href="#">Kit kit oncogene [ Mus musculus (house mouse) ]</a>                                                                                                                                                                                                                                            |
| mRNA Refseq 2                       | <a href="#">NM_001122733</a>                                                                                                                                                                                                                                                                               |
| Protein Refseq 2                    | <a href="#">NP_001116205</a>                                                                                                                                                                                                                                                                               |
| UniProt ID 2                        | <a href="#">P05532</a>                                                                                                                                                                                                                                                                                     |
| <b>Bioactivity-Antibody Binding</b> | 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).                                                                                                   |
| <b>Bioactivity-Ligand Binding</b>   | 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).                                                                                                       |

**SDS-PAGE**

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

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