

Product datasheet for **RC600015**

CD117 (NM_001093772) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CD117 (NM_001093772) Human Tagged ORF Clone
Tag:	DDK-His
Symbol:	CD117
Synonyms:	C-Kit; CD117; MASTC; PBT; SCFR
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5-DDK-His (PS100068)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RC600015 representing leader sequence plus the extracellular domain region of NM_001093772

Red=Cloning site Blue=ORF Green=Tags(s)

GTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCTGGTACCGAGGAGATCCGCCGCCG
CGATCGCC

ATGAGAGGCGCTCGGGCGCCTGGGATTTCTCTGCGTTCTGCTCTACTGCTTCGCGTCCAGACAGGCT
CTTCTCAACCATCTGTGAGTCCAGGGAAACCGTCTCCACCATCCATCCAGGAAAATCAGACTTAAT
AGTCCGCGTGGGCGACGAGATTAGGCTGTTATGCACTGATCCGGGCTTTGTCAAATGGACTTTTGAGATC
CTGGATGAAACGAATGAGAATAAGCAGAATGAATGGATCACGAAAAGGCAGAAGCCACCAACACCGGCA
AATACACGTGCACCAACAAACACGGCTTAAGCAATTCATTTATGTGTTGTTAGAGATCCTGCCAAGCT
TTTCTTGTGACCGCTCCTGTATGGGAAAGAAGACAACGACACGCTGGTCCGCTGTCTCTCACAGAC
CCAGAAGTGACCAATTATCCCTCAAGGGGTGCCAGGGGAAGCCTTCCCAAGGACTTGAGGTTTATTC
CTGACCCCAAGGGGGCATCATGATCAAAAGTGTGAAACGCGCCTACCATCGGCTCTGTCTGCATTGTC
TGTGGACCAGGAGGGCAAGTCAAGTGTGCGGAAAATTCATCCTGAAAGTGAGGCCAGCCTTCAAAGCT
GTGCCTGTTGTGCTGTGTCCAAAGCAAGCTATCTTCTAGGGAAGGGGAAGAATTCACAGTGACGTGCA
CAATAAAGATGTGTCTAGTTCTGTGACTCAACGTGGAAAAGAGAAAACAGTCAGACTAAACTACAGGA
GAAATAAATAGCTGGCATCACGGTGACTTCAATTATGAACGTGACGGCAACGTTGACTATCAGTTACGCG
AGAGTTAATGATTCTGGAGTGTTGATGTGTTATGCCAATAATACTTTGGATCAGCAAATGTCACAAACA
CCTTGGAAAGTAGATAAAGGATTCATTAATATCTTCCCATGATAAACACTACAGTATTTGTAACGA
TGGAGAAAATGTAGATTTGATTGTTGAATGAAGCATTCCCAAACCTGAACACCAGCAGTGGATCTAT
ATGAACAGAACCTTCACTGATAAATGGGAAGATTATCCCAAGTCTGAGAATGAAAGTAATATCAGATACG
TAAGTGAACCTTCACTAACGAGATTAAGGACCCGGAAGGAGGCACTTACACATTCTAGTGTCCAATTC
TGACGTCAATGCTGCCATAGCATTAAATGTTTATGTGAATACAAAACCAGAAATCCTGACTTACGACAGG
CTCGTGAATGGCATGCTCCAATGTGTGGCAGCAGGATTCCAGAGCCACAATAGATTGGTATTTTTGTC
CAGGAACTGAGCAGAGATGCTCTGCTTCTGACTGCCAGTGGATGTGCAGACACTAAACTCATCTGGGCC
ACCGTTTGGAAAGCTAGTGGTTCAGAGTTCTATAGATTCTAGTGCATTCAAGCACAATGGCACGGTTGAA
TGTAAGGCTTACAACGATGTGGCAAGACTTCTGCCTATTTAACTTTGCATTTAAAGAGCAAATCCATC
CCCACACCCTGTTCACTCT

ACGCGTTCAGGGCGACTACAAGGATGACGACGATAAGGGATCTCATCATCACCATCACCATTAATGAGATC
TGGTACCGATATCAAGCTTGTGACTCTAGA

Protein Sequence:

>RC600015 representing signal peptide plus the extracellular domain region of NM_001093772

Red=Cloning sites Green= DDK and 6XHIS Tags

MRGARGAWDFLCVLLLLLRVQTGSSQPSVSPGEPSPPSIHPGKSDLIVRVGDEIRLLCTDPGFVKWTFEIL
LDETENKQNEWITEKAEATNTGKYTCTNKHGLSNSIYVVRDPAKLFVDRSLYGEDNDTLVRCPLTD
PEVTNYSLKGCQKPLPKDLRFIPDPKAGIMIKSVKRAYHRLCLHCSVDQEGKSVLSEKFLKVRPAFKA
VPVVSVKASYLLREGEEFTVTCTIKDVSSSVYSTWKRENSQTKLQEKYNSWHHGFNYERQATLTSSA
RVNDSGVFMCYANNTFGSANVTTTLEVVDKGFINIFPMINTTVFVNDGENVDLIVEYEAFPKPEHQWIIY
MNRFTFDKWEDYPKSESNIRYVSELHLTRLKGTEGGTYTFLVNSDVNAIAFNVYVNTKPEILTYDR
LVNGMLQCYAAGFPEPTIDWYFCPGTEQRCSASVLPVDVQTLNSSGPPFGKLVVQSSIDSSAFKHNGTVE
CKAYNDVGKTSAYFNFAFKEQIHPHTLFTP

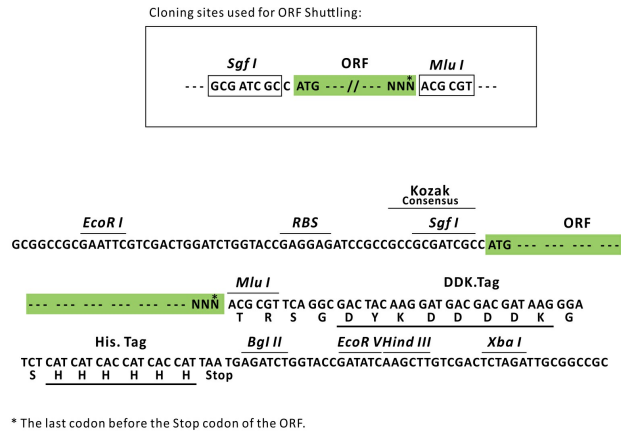
TRSGTRSGDYKDDDDKGSHHHHHH

Chromatograms:

https://cdn.origene.com/chromatograms/mk8117_d08.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_001093772

ORF Size: 1560 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the extra cellular domain of the protein with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_001093772.1](#), [NP_001087241.1](#)

RefSeq Size: 5178 bp

RefSeq ORF: 2919 bp

Locus ID: 3815

UniProt ID: [P10721](#)

Cytogenetics: 4q12

Protein Families:	Adult stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Protein Kinase, Stem cell - Pluripotency, Transmembrane
Protein Pathways:	Acute myeloid leukemia, Cytokine-cytokine receptor interaction, Endocytosis, Hematopoietic cell lineage, Melanogenesis, Pathways in cancer
MW:	58.4 kDa
Gene Summary:	<p>This gene encodes a receptor tyrosine kinase. This gene was initially identified as a homolog of the feline sarcoma viral oncogene v-kit and is often referred to as proto-oncogene c-Kit. The canonical form of this glycosylated transmembrane protein has an N-terminal extracellular region with five immunoglobulin-like domains, a transmembrane region, and an intracellular tyrosine kinase domain at the C-terminus. Upon activation by its cytokine ligand, stem cell factor (SCF), this protein phosphorylates multiple intracellular proteins that play a role in the proliferation, differentiation, migration and apoptosis of many cell types and thereby plays an important role in hematopoiesis, stem cell maintenance, gametogenesis, melanogenesis, and in mast cell development, migration and function. This protein can be a membrane-bound or soluble protein. Mutations in this gene are associated with gastrointestinal stromal tumors, mast cell disease, acute myelogenous leukemia, and piebaldism. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2020]</p>