

## Product datasheet for **RC213772**

### CD117 (NM\_001093772) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CD117 (NM_001093772) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CD117
Synonyms:	C-Kit; CD117; MASTC; PBT; SCFR
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC213772 representing NM\_001093772  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAGAGGCGCTCGGGCGCCTGGGATTTCTCTGCGTTCTGCTCCTACTGCTTCGCGTCCAGACAGGCT  
 CTTCTCAACCATCTGTGAGTCCAGGGAAACCGTCTCCACCATCCATCCATCCAGGAAAATCAGACTTAAT  
 AGTCCGCGTGGGCGACGAGATTAGGCTGTTATGCACTGATCCGGGCTTTGTCAAATGGACTTTTGAGATC  
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 AATACACGTGCACCAACAAACACGGCTTAAGCAATTCATTTATGTGTTTGTAGAGATCCTGCCAAGCT  
 TTTCTTGTGACCGCTCCTTGTATGGGAAAGAAGACAACGACACGCTGGTCCGCTGTCTCTCACAGAC  
 CCAGAAGTGACCAATTATCCCTCAAGGGTGCCAGGGGAAGCCTTCCCAAGGACTTGAGGTTTATTC  
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 GAAGCCCTCATGTCTGAACTCAAAGTCCTGAGTTACCTTGGTAATCACATGAATATTGTGAATCTACTTG  
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 CCCTGAACACGCACCTGCTGAAATGTATGACATAATGAAGACTTGTGGGATGCAGATCCCTAAAAAGA  
 CCAACATTCAGCAAATGTTTCAGCTAATTGAGAAGCAGATTTCCAGAGACCAATCATATTTACTCCA  
 ACTTAGCAAACCTGCAGCCCAACCGACAGAAGCCCGTGGTAGACCATTCTGTGCGGATCAATTCTGTGCG  
 CAGCACCGCTTCTCTCCAGCCTCTGCTTGTGCACGACGATGTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC213772 representing NM\_001093772  
 Red=Cloning site Green=Tags(s)

MRGARGAWDFLCVLLLLLRVQTGSSQPSVSPGEPSPPSIHPGKSDLIVRVGDEIRLLCTDPGFVKWTFEIL  
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 PEVTNYSLKGCGKPLPKDLRFIPDPKAGIMIKSVKRAYHRLCLHCSVDQEGKSVLSEKFIKVRPAFKA  
 VPVVSVKASYLLREGEEFTVTCTIKDVSSSVYSTWKRENSQTKLQEKYNSWHHGDFNYERQATLTISSA  
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 MNRTFTDKWEDYPKSENE SNIRYVSELHLTRLKGTGGTYTFLVNSDVNAAIAFNVYVNTKPEILTYDR  
 LVNGMLQCVAAGFPEPTIDWYFCPGTEQRCSASVLPVDVQTLNSSGPPFGKLVVQSSIDSSAFKHNGTVE  
 CKAYNDVGKTSAYFNFAFKEQIHPHTLFTPLLIGFVIVAGMMCIIVMILTYKYLQKPMYEVQWKVVEEIN  
 GNNYVYIDPTQLPYDHKWEFPRNRLSFGKTLGAGAFGKVVEATAYGLIKSDAAMTVAVKMLKPSAHLTER  
 EALMSELKVL SYLGNHMNI VNLGACTIGGPTLVITEYCCYGDLLNFLRRKRDSFICSKQEDHAEALYK  
 NLLHSESSCSDSTNEYMDMKPGVSYVPTKADKRRSVRIGSYIERDVT PAIMEDDELALDLEDLLSFSY  
 QVAKGMAFLASKNCIHRDLAARNILLTHGRITKICDFGLARDIKNDSNYVVKGNARLPVKWMAPE SIFNC  
 VYTFESDVWSYGI FLWELFSLGSSPYGMPVDSKFYKMIKEGFRMLSPEHAPAEMYDIMKTCWDADPLKR  
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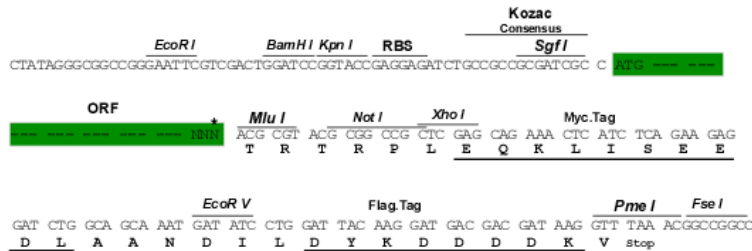
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg4441\\_b01.zip](https://cdn.origene.com/chromatograms/mg4441_b01.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

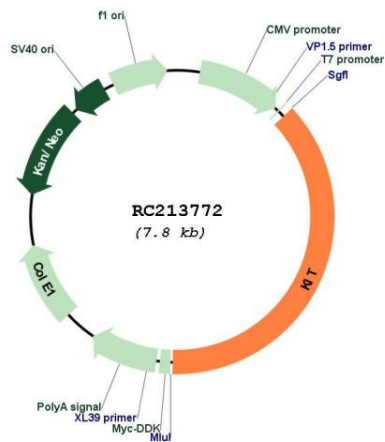
**ACCN:** NM\_001093772

**ORF Size:** 2916 bp

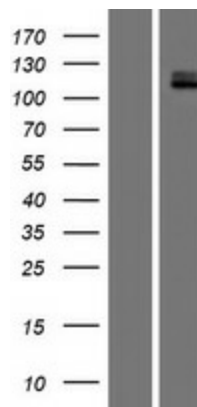
<b>OTI Disclaimer:</b>	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_001093772.1</a> , <a href="#">NP_001087241.1</a>
<b>RefSeq Size:</b>	5178 bp
<b>RefSeq ORF:</b>	2919 bp
<b>Locus ID:</b>	3815
<b>UniProt ID:</b>	<a href="#">P10721</a>
<b>Cytogenetics:</b>	4q12
<b>Protein Families:</b>	Adult stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Protein Kinase, Stem cell - Pluripotency, Transmembrane
<b>Protein Pathways:</b>	Acute myeloid leukemia, Cytokine-cytokine receptor interaction, Endocytosis, Hematopoietic cell lineage, Melanogenesis, Pathways in cancer
<b>MW:</b>	109.3 kDa

**Gene Summary:**

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]

**Product images:**


Circular map for RC213772



Western blot validation of overexpression lysate (Cat# [LY420696]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213772 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).