

## Product datasheet for **SC120061**

### CD117 (NM\_000222) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CD117 (NM_000222) Human Untagged Clone
Tag:	Tag Free
Symbol:	CD117
Synonyms:	C-Kit; CD117; MASTC; PBT; SCFR
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:**

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>OriGene ORF sequence for NM_000222 edited
ATGAGAGGCGCTCGCGGCGCCTGGGATTTCTCTGCGTTCTGCTCCTACTGCTTCGCGTC
CAGACAGGCTCTTCTCAACCATCTGTGAGTCCAGGGGAACCGTCTCCACCATCCATCCAT
CCAGGAAAATCAGACTTAATAGTCCGCGTGGGCGACGAGATTAGGCTGTTATGCACTGAT
CCGGGCTTTGTCAAATGGACTTTTGAGATCCTGGATGAAACGAATGAGAATAAGCAGAAT
GAATGGATCACGAAAAGCAGAAGCCACCAACACCGGCAAATACACGTGCACCAACAAA
CACGGCTTAAGCAATTCATTTATGTGTTTGTAGAGATCCTGCCAAGCTTTTCCTTGTT
GACCGCTCCTTGTATGGGAAAGAAGACAACGACACGCTGGTCCGCTGTCTCTCACAGAC
CCAGAAGTGACCAATTATTCCCTCAAGGGTGCCAGGGGAAGCCTCTTCCAAGGACTTG
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TATCTTCTTAGGGAAGGGGAAGAATTACAGTGACGTGCACAATAAAAGATGTGTCTAGT
TCTGTGTACTCAACGTGAAAAGAGAAAACAGTCAGCAGACTAACTACAGGAGAAATAT
AATAGCTGGCATCACGGTGAATCAATTATGAACGTGAGGCAACGTTGACTATCAGTTCA
GCGAGAGTTAATGATTCTGGAGTGTTCATGTGTTATGCCAATAATACTTTTGATCAGCA
AATGTCACAACAACCTTGGAAAGTAGTAGATAAAGGATTCAATTAATATCTTCCCCATGATA
AACACTACAGTATTTGTAACGATGGAGAAAATGTAGATTTGATTGTTGAATATGAAGCA
TTCCCCAACCTGAACACCAGCAGTGGATCTATATGAACAGAACCTTCACTGATAAATGG
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AGGCTCGTGAATGGCATGCTCCAATGTGTGGCAGCAGGATCCCAGAGCCACAATAGAT
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CACAAATGGGAGTTTCCAGAAACAGGCTGAGTTTTGGGAAAACCTGGGTGCTGGAGCT
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GAACTCAAAGTCTGAGTTACCTTGGTAATCACATGAATATTGTGAATCTACTTGGAGCC
TGCACCATTGGAGGGCCACCCTGGTCATTACAGAATATTGTTGCTATGGTGATCTTTTG
AATTTTTTGAGAAGAAAACGTGATTCATTTATTTGTTCAAAGCAGGAAGATCATGCAGAA
GCTGCACCTTATAAGAATCTTCTGCATTCAAAGGAGTCTTCTGCAGCGATAGTACTAAT
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TATGACATAATGAAGACTTGCTGGGATGCAGATCCCCTAAAAGACCAACATTCAAGCAA
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GCAAACCTGCAGCCCCAACCGACAGAAGCCCGTGGTAGACCATTCTGTGCGGATCAATTCT
GTCGGCAGCACCGCTTCTCCTCCAGCCTCTGCTTGTGCACGACGATGTCTGA
    
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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_000222 unedited  
 GGGTCAGCATTTGTATACGACTCCTATAGGGCGGCCGGAATTCGCACGAGGGTGGACCA  
 GAGCTCGGATCCCATCGCAGTACCGCGATGAGAGGCGCTCGCGGCGCTGGGATTTTCT  
 CTGCGTTCTGCTCCTACTGCTTCGCGTCCAGACAGGCTTCTCAACCATCTGTGAGTCC  
 AGGGGAACCGTCTCCACCATCCATCCATCCAGGAAAATCAGACTTAATAGTCCGCGTGGG  
 CGACGAGATTAGGCTGTTATGCACTGATCCGGGCTTTGTCAAATGGACTTTTGAGATCCT  
 GGATGAAACGAATGAGAATAAGCAGAATGAATGGATCACGAAAAGGCAGAAGCCACCAA  
 CACCGGCAAATACACGTGCACCAACAAACACGGCTTAAGCAATCCATTTATGTGTTGT  
 TAGAGATCCTGCCAAGCTTTTCTTGTTGACCGCTCCTGTATGGGAAAGAACACGA  
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 CCAGGGGAAGCCTCTTCCAAGGACTTGAGGTTTATTCCTGACCCCAAGGCGGCATCAT  
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 GGGCAAGTCAGTGTGTCGAAAAATTCATCCTGAAAGTGAGGCCAGCCTTCAAAGCTGT  
 GCCTGTTGTGCTGTGTCGAAAGCAAGCTATCTTCTTANGGAAGGGGAAAGATTCACAGT  
 GACGTGCACAATAAAGATGTGTCTAGNTCTGTGTACTCAAACGTGAANNAGAGANACAGT  
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 GTCAGGC

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_000222 unedited  
 CTTATGGAACGCGGCACGCAATCTAGGATCGAGTTTTTTTTTTTTTTTTTATATATGTA  
 CATTTTATTAGAATCTTCAGAAGTGTCAACAATTGGACAACATACAGGAATAAAACACG  
 TGGAACACCAACATCCTTTAAACTTACGCGCTTATGTATTTACACATAAAGTACTGTA  
 TATATAAAAAATATTTTCAAGGACTCATGGCTTGGGAATATTCAAAAGACATTATTGCT  
 ACATTTCAATATTTACAAAAAAGCCACAAAATAATTTCAAACATTAAGCCACTGCAAAG  
 AAACATCTGATGTAAGAAAAATATAAAAAATATAAACTTTCAAGAATATCCAAGACAAA  
 ACTCTCAATGAAGTGCCCTGAAGTACCTAGACATCTATAACTAACAACCACTTTTCTTA  
 CTATCATTGAAGTCAATAGAAACACAAAGGAATTTTTCAGACAAAGTATGGCAAACAACA  
 ATCTCTGGGTGACAACACAACCCCAAAATCTGTAACTTTGGAAAGGTGCGAGAGCATA  
 GAACTCCAGTGCAAATGGTTACTTCCAGATAACGGCCACAGTTCTCTAAATGTAGTCTAA  
 GAAATGTAGAAGGGGAAACCATAAAGGCAACATACCTGAATCTTTCAAGACACACACAA  
 ACTCTGCCATGTACACATTTGCCTTTTATATTGNGCAGTGAGGAAGGGGAGTTTTTGT  
 TGCTCTGCTTTGTTTTAAAGAGTAAACCTACCAGATTATATTCAGGCTACAGTCTAAGG  
 GTAAAATTTAAAAGTTTACGAAACAGTACCATTATGGAAGTCTAAGAACAGGTTTCAG  
 TCAGATGAGTCTAAATAACAACATGCCCTAAATGCAAGTGAAGTCAAAATCCTAGGGACT  
 GATGCTCTCCCTCCTCTGACCCATATGGAGTCTCTCGTAAGCTCTCTCAACGCTTTGTG  
 AAAGAAACAAACACTCCTCAATGAAAGC

**Restriction Sites:**

BamHI-NotI

**ACCN:**

NM\_000222

**Insert Size:**

5100 bp

<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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></p>
<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_000222.1</a> , <a href="#">NP_000213.1</a>
<b>RefSeq Size:</b>	5084 bp
<b>RefSeq ORF:</b>	2934 bp
<b>Locus ID:</b>	3815
<b>UniProt ID:</b>	<a href="#">P10721</a>
<b>Cytogenetics:</b>	4q12
<b>Domains:</b>	pkinase, TyrKc, S_TKc, ig, IGc2, IG
<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

**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]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).