

## Product datasheet for **SC107728**

### SBF1 (NM\_002972) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SBF1 (NM_002972) Human Untagged Clone
Tag:	Tag Free
Symbol:	SBF1
Synonyms:	CMT4B3; DENND7A; MTMR5
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL6</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_002972, the custom clone sequence may differ by one or more nucleotides

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ATGGCGCGGCTCGCGGACTACTTCGTGCTGGTGGCGTTTCGGGCCACCCGCGGGAGTGGGAAGGCC
AGGGCCAGATTCTGCAGCGCTTCCAGAGAAGGACTGGGAGGACAACCCATTCCCCAGGGCATCGAGCT
GTTTTGCCAGCCCAGCGGTGGCAGCTGTGTCCCAGAGGAATCCACCGACCTTCTTTGTTGCTGCCTC
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AAACGACGCGGTGGAGGATGCCACAGAGAGGGAGGAAGAGGGGGATGAGGGAGGCCAGACCCACCTGTC
TCCCACAGCACCTGCCCCATCTGCCAGCTGTTTGCACCGAAGACGCTGGTACTGGTGTGCGGACTCGAC
CACACGGAGGTGTTGAGAACAGCCTTGGCCTCATCTATGCCATCCACGTGGAGGGCCTGAATGTGTGCC
TGGAGAACGTGATTGGGAACCTGCTGACGTGCACTGTGCCCTGGCTGGGGGCTCGCAGAGGACGATCTC
TTTGGGGGCTGGTGACCGCAGGTCATCCAGACTCCACTGGCCGACTCGCTGCCCGTACGCCGCTGCAGC
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GAGGGCATGGCCTTTGCTGGCTTGTGTGAGAGCGTGGGGTCCCATACCGCCCTACGGACCTGTTGATG
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AGGCCCGGTGAGAGCAGCCACTGCGACGGGTGCCCGACCTTCCCCGGCTGGATGAGGGCACCGTGC
AGTGGATCGTGGACCAGGCTGCAGCCAAGATGCAGGGTGCACCCAGCTGTGAAGGCCAGAGGAGGAC

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CACCGTGCCCTCAGGGCCCCCATGACTGCCATACTGGAGCGGTGCAGTGGGCTGCATGTCAACAGCGCC  
 CGGCGGCTGGAGTTGTGCGCAACTGCATCTCCTACGTGTTTGGAGGGAAAATGCTTGAGGCCAAGAAGC  
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 CCCACGGAGACCTGGCCCCCGCCAGGAGTTGGGGAGGCACCTTCCCAGGAGGACGAGCGCTCTGCC  
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 GAAGGAGGAGAGCACGGTGTTCAGCCAGGCCATCCACTATGCCAACCGCATGAGCTACCTCCTCTGCC  
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 GGTGGCTGCGCTGACCAAGGAGAAGCGCATCAGCGTCCAGACCCCTGTGGACCAGCTCCTGCAGGACGGG  
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 TCCTTGGGGACAAAGCCAGCTCAAGGGTGTGCGGTGAGACCCCTGCAGCAGTGGGAGCTGGTGCCAT  
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 ACAAGCTGCTGCAGGTGTCTGTGCTGGTGGAGCTCCTGATTACAGGCTCCTCCGCTGCTGGTGGGCT  
 GGAGGATGGCTGGGACATCACACCCAGTGGTATCCTTGGTGCAGCTGCTCTCAGACCCCTTCTACCGC  
 ACGCTGGAGGGCTTTCGCTGCTGGTGGAGAAGGAGTGGCTGTCTTCCGCCATCGCTTACGCCACCGTG  
 GAGCTCACACCCTGGCCGGGAGAGCAGCGGCTTACACCCGTCTTCTGCAATTCTGGACTGCGTACA  
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 ATGAGGAGAAGGGGAACGCAGGGCCAGGTGCCGTGCAGGTCTGTGTGGGAGTATGTGGACCGGCTGAG  
 CAAGAGGACGCTGTGTCCACAATTACATGTATGCGCCCGAGGACGAGAGTCTCGCGCCCTACAGC  
 AACGTGTCCAACCTGAAGGTGTGGGACTTCTACTGAGGAGACGCTGGCCGAGGGCCCTCCTATGACT  
 GGGAACTGGCCAGGGGGCCCTGAACCCAGAGGAAGAACGGTCTGATGGAGGCGCTCCCGAGAGCAG  
 GCGCCGCTGGTGTGGCCCTGTTACGACAGCTGCCCGGGGCCAGCCTGACGCCATCTACGCCTGCTG  
 GAGGAGCTGCAGAGGCTGGAGACAGAGTTGGGCCAACCCGCTGAGCGCTGGAAGGACACCTGGGACCGGG  
 TGAAGGCTGCACAGCGCTCGAGGGCCGGCCAGACGGCCGTGGCACCCCTAGCTCCCTCCTTGTGTCCAC  
 CGACCCACCACCGTGCCTGCTGGTGTACTGCAGGAGGGGCCGCTGGGCTCCACCTGAGCCTC

AGCCTGGACAGCGACCAGAGTAGTGGCTCAACCACATCCGGCTCCCGTCAGGCTGCCCGCCGAGCACCA  
GCACCCTGTACAGCCAGTTCAGACAGCAGAGAGTGAGAACAGGTCTACGAGGGCACTCTGTACAAGAA  
GGGGGCCCTTATGAAGCCTTGAAGGCCCGCTGGTTCTGTGCTGGACAAGACCAAGCACCAGCTGCGCTAC  
TACGACCACCGTGTGGACACAGAGTGCAAGGGTGTATCGACTTGGCGGAGGTGGAGGCTGTGGCACCTG  
GCACGCCCACTATGGGTGCCCTAAGACTGTGGACGAGAAGGCCCTTTTACGTGAAGACAACGCGTCG  
CGTTTACAACCTGTGCCAGGACGTGCCCTCGGCCAGCAGTGGTGGACCGGATCCAGAGCTGCCTG  
TCGGACGCCTGA

**5' Read Nucleotide  
Sequence:**

>OriGene 5' read for NM\_002972 unedited  
CCCATTTTCCCGCCGTTGCAGCTTTGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATA  
AGCAGATCTCATTTAGGTGACACTATAGAATAACAAGCTACTTGTCTTTTGCAGCGGCC  
GCGAATTCGGCACGAGGGAACAGGGGTGTCCGGGGTGCAGGTCACAGGGCCGGGGCCGG  
GCCATGAGCGCGCCGCTCCTCGAGTCCCCGAGCCGCGGAGCCCGCCCGCCCTCGGGCC  
GCCCCGCGTCCCTCGCCATGGCGCGGCTCGCGGACTACTTCGTGCTGGTGGCGTTCCGGC  
CGCACCCGCGCGGAGTGGGAAGGCCAGGGCCAGATTCTGCAGCGCTTCCAGAGAAGG  
ACTGGGAGGACAACCCATTCCCCAGGGCATCGAGCTGTTTTGCCAGCCAGCGGTGGC  
AGCTGTGTCCGAGAGGAATCCACCGACCTTCTTTGTTGCTGCTCACCAGACATCAACT  
CCGAGCGCACTACTGCGCTGCTTACCTTCTGGGAGCCAGCGGAGCCTTACAGGAAA  
CGACGCGCGTGGAGGATGCCACAGAGAGGGAGGAAGAGGGGGATGAGGGAGGCCAGACCC  
ACCTGTCTCCACAGCACCTGCCCCATCTGCCAGCTGTTTGCACCGAAGACGCTGGTAC  
TTGGTGTGCGACTCGACACCGGGAGGTTCAGGAACAGCCTTGGCCTCATCTATGCC  
ATCCACGTGGAGGCCTGAATGTGTGCCTGGAGAACGTGATTGGGAACCTGCTGACGTGC  
ACTGTGCCCTGGCCTGGGGCTCGCAGAGCACGATCTTTTTGGGGCTGGTGAACCGCC  
AGGTCAATCCGAACCTCACTGGCCGACTCGCTGCCCGTACGCCGCTGCAGCGTGGCCCTG  
CTTTACGCCAGCTAGCTCN

**3' Read Nucleotide  
Sequence:**

>OriGene 3' read for NM\_002972 unedited  
ACAACGAAATGGGGTTTTNTATTTCAATATTTCTGGTTCTAGNAACTCCCTGCAGCCGCT  
GGCTGGACCAGCACAGCTGACGGGGCCGACTATTTACAGGCCATTGCGGGCTGTACC  
TTGGCCACCTCCCGGCACGGTGTCTAGCTGTGACGCCAAAATAAGTTAGGGCCGGCCGGG  
CGGGGCGGGGCGGGGACGGGGGCTGTACACACAAGTGCTGGGGGCTCGGGCCTCAATAC  
TGTGAGGGCCGGGGCTGTAACATGGCCGGGGCGGCCCTGCCACCCCTAGTGGTCCGT  
AACGACCGGAAGCAGAGCAGCCGGGAGGGCTGGGAGGCTCAGGCGTCCGACAGGCAGCT  
CTGGATCCGGTCCACCACTGCTGGGCCGAGGGCACGTCCTGGGCACAGAAGTTGTAAC  
GCGACCGTGTCTTACAGTCAAAGAAGGCCTTCTCGTCCAGGTCTTAGGGCACCCAT  
AGTGGGCGTGCCAGGTGCCACAGCCTCCACCTCCGCCAAGTCGATGACACCCTTGCACTC  
TGTGTCCACAGGTGGTGTAGTAGCGCAGCTGGTGTCTGGTCTTGTCCAGCACGAACCA  
GCGGGCCTTCAAGGCTTCATGAAGGCCCTTCTTGTACAGAGTGCCCTCGTAGGACCT  
GTTCTCACTCTGCTGTCTGGAAGTGGCTGTACAGGGTGTGGTGTGCTGCGGCGGGCAGC  
TGTGTAACAGGGCCACACCAGCGGCGCTGCTCTGGGAGCGCCTCCATCAGACCGTT  
CTTCTCTGGGGTTTCAAGGGGCCCTGGGCCAGTTCAGTTCATAGGGAGGGCCCTCGG  
CCAGCGTCTCCTCATGTAGAAGTCCACACCTTCAGTTTGAACGTTGCTGTTAGGCC

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_002972

**Insert Size:**

6000 bp

**OTI Disclaimer:** 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 [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

**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\\_002972.1](#), [NP\\_002963.1](#)

**RefSeq Size:** 8033 bp

**RefSeq ORF:** 5604 bp

**Locus ID:** 6305

**UniProt ID:** [O95248](#)

**Cytogenetics:** 22q13.33

**Protein Families:** Druggable Genome, Phosphatase

**Gene Summary:** This gene encodes a member of the protein-tyrosine phosphatase family. However, the encoded protein does not appear to be a catalytically active phosphatase because it lacks several amino acids in the catalytic pocket. This protein contains a Guanine nucleotide exchange factor (GEF) domain which is necessary for its role in growth and differentiation. Mutations in this gene have been associated with Charcot-Marie-Tooth disease 4B3. Pseudogenes of this gene have been defined on chromosomes 1 and 8. [provided by RefSeq, Dec 2014]