

## Product datasheet for SC323526

### BUB1 (NM\_004336) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	BUB1 (NM_004336) Human Untagged Clone
Tag:	Tag Free
Symbol:	BUB1
Synonyms:	BUB1A; BUB1L; hBUB1
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC323526 sequence for NM_004336 edited (data generated by NextGen Sequencing)

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ATGGACACCCCGAAAAATGTCCTTCAGATGCTTGAAGCCACATGCAGAGCTACAAGGGC
AATGACCTCTTGGTGAATGGGAAAGATACATACAGTGGGTAGAAGAGAATTTTCTGAG
AATAAAGAATACTTGATAACTTTACTAGAACATTTAATGAAGGAATTTTATAGATAAGAAG
AAATACCACAATGACCCAAGATTCATCAGTTATTGTTAAAAATTTGCTGAGTACAACAGT
GACCTCCATCAATTTTTGAGTTTCTGTACAACCATGGGATTGGAACCTGTCATCCCCT
CTGTACATTGCCTGGCGGGGCATCTGGAAGCCCAAGGAGAGCTGCAGCATGCCAGTGCT
GTCCTTCAGAGAGGAATCAAACCAGGCTGAACCCAGAGAGTTCCTGCAACAACAATAC
AGGTTATTTAGACACGCCTCACTGAAACCCATTTGCCAGCTCAAGCTAGAACCTCAGAA
CCTCTGCATAATGTTTCAGGTTTTAAATCAAATGATAACATCAAAATCAAATCCAGGAAAT
AACATGGCCTGCATTTCTAAGAATCAGGGTTCAGAGCTTCTGGAGTGATATCTTCAGCT
TGTGATAAAGAGTCAAATATGGAACGAAGAGTGATCACGATTTCTAAATCAGAATATTCT
GTGCACTCATCTTTGGCATCCAAAGTTGATGTTGAGCAGGTTGTTATGTATTGCAAGGAG
AAGCTTATTCGTGGGGAATCAGAATTTTCTTTGAAAGATTGAGAGCCCAGAAATACAAT
CAACGGAGAAAGCATGAGCAATGGGTAATGAAGACAGACATTATATGAAAAGGAAAGAA
GCAAAATGCTTTTGAAGAACAGCTATTAACAGAAAATGGATGAACCTCATAAGAAGTTG
CATCAGGTGGTGGAGACATCCCATGAGGATCTGCCCGCTTCCCAGGAAAGGTCAGGTT
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CCAGTAACTATCAGCAGACACCAGTGAACATGGAAGAAACCCAAGAGAGGCACCTCCT
GTTGTTCTCCTTTGGCAAATGCTATTTCTGCAGCTTTGGTGTCCCAGCCACCAGCCAG
AGCATTGCTCCTCCTGTTCTTTGAAAGCCAGACAGTAACAGACTCCATGTTTGCAAGT
GCCAGCAAAGATGCTGGATGTGTGAATAAGAGTACTCATGAATTCAGCCACAGAGTGGA
GCAGAGATCAAAGAAGGTGTGAAACACATAAGGTTGCCAACACAAGTTCTTTTACACA
ACTCCAAACACATCACTGGGAATGGTTCAGGCAACGCCATCCAAAGTGCAGCCATCACCC
ACCGTGACACAAAAGAAGCATTAGGTTTCATCATGAATATGTTTCAGGCTCCTACACTT
CCTGATATTTCTGATGACAAAGATGAATGGCAATCTCTAGATCAAATGAAGATGCATTT

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GAAGCCCAGTTTCAAAAAATGT AAGGTCATCTGGGGCTTGGGGAGTCAATAAGATCATC
TCTTCTTTGTCATCTGCTTTTCATGTGTTTGAAGATGGAAACAAAGAAAATTATGGATTA
CCACAGCCTAAAAATAAACCCACAGGAGCCAGGACCTTTGGAGAACGCTCTGTCAGCAGA
CTTCTTCAAAACCAAAGGAGGAAGTGCCTCATGCTGAAGAGTTTTTGGATGACTCAACT
GTATGGGGTATTCGCTGCAACAAAACCTGGCACCCAGTCTAAGAGCCCAGGAGACTTC
ACATCTGCTGCACAACCTTGCCTACACCATTCCACAAGCTCCAGTGGAGTCAGTGCAC
ATTTTAGAAGATAAAGAAAATGTGGTAGCAAAAACAGTGTACCCAGGCGACTTTGGATTCT
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CCATGGGATGATAAGCTGATTTTCAAACTTTTATCTGGGCTTTCTAAACCAGTGAGTTCC
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GACAATTTCACTTGGAAACGGATTTTTGGAACAGGATGATGAAGATGATTTATCTGCT
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ATATTCACAGCAAAGTGTGAAACATCTGGTTTTTCAAGTGTGTTGAGATGCTCAGCAACAAA
CCATGGAACACTACAGATCGATTACTTTGGGGTGTCTGCAACAGTATATTGCATGCTCTTT
GGCACTTACATGAAAGTAAAAATGAAGGAGGAGAGTGAAGCCTGAAGGTCTTTTTAGA
AGGCTTCTCATTTGGATATGTGGAATGAATTTTTTTCATGTTATGTTGAATATCCAGAT
TGTCATCATCTTCCATCTTTGGATTTGTTAAGGCAAAAGCTGAAGAAAGTATTTCAACAA
CACTATACTAACAAAGATTAGGGCCCTACGTAATAGGCTAATTGTACTGCTCTTAGAATGT
AAGCGTTCACGAAAATAA
    
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Clone variation with respect to NM\_004336.3  
2462 a=>t

**5' Read Nucleotide Sequence:**

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>OriGene 5' read for mutant NM_004336 unedited
CCGCCGTTGAGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAAC
CGTCAGAAATTTTGAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGCGGCTTCTAGTTTGC
GGTTCAGGTTTGGCCGCTGCCGGCCAGCGTCTCTGGCCATGGACACCCCGAAAATGTCCTTCAGATGC
TTGAAGCCACATGCAGAGCTACAAGGGCAATGACCCTCTTGGTGAATGGGAAAGATACATACAGTGGGT
AGAAGAGAATTTTCTGAGAATAAAGAATACTTGATAACTTTACTAGAACATTTAATGAAGGAATTTTAA
GATAAGAAAGAAAATACCACAATGACCCAAGATTCATCAAGTTAATTGTTAAAAATTTGCTGAGTACAAC
AGTTGACCCTCCATATTTTTTTGAAGTTTTCTGTACCAACCCATGGGGATGGGACCCCTGGTCAATCCC
CTTCTGTACATTGGCTGGGCCGGGGCATTCTGGAAGCCCAAGGAAGACCTGCGCATGGCAGGGCTGTCTT
TCGAGAGGGAATTCAAAACAGGCTGGACCCAGAGAGATTCCTCGACACACATACAGGTTATTTACGACC
GGCTTACTGAAACCACATTTGGCAGCTAAGCTAACCTCAAACCTCGCATAGTCAAGTTATCAGTAACCTC
ATCATTCGGAAAACCTGCGGATTCTAGAACAGGTCAGCCTCGAGATCTCACCTGTGCAGTCATGGACAAG
TCAATTACGAGCTGGCCACTGACCAATGTGACCCGTAGATCCAGAAACTTCGATATA
    
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<b>Kinase Domain Sequence:</b>	>SC323526 kinase domain raw sequence. By performing <a href="#">BLASTX</a> analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation TTGCTAGRCTTTGCCAGGTGTACGAAGCTACCCAGGGAGATCTGAATGATGCTAAAAATAACAGAAATT TGTTTTAATGGTCCAAAAGCCTGCCAACCCCTGGGAATTCTACATTGGGACCCAGTTGATGGAAAGACTA AAGCCATCTATGCAGCACATGTTTATGAAGTCTATTCTGCCCACTTATTCCAGAATGCCAGTGTATTAG TAGGAGAGCTCTACAGCTATGGAACATTATTAATGCCATTAACC
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_004336
<b>Insert Size:</b>	3900 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>OTI Annotation:</b>	This kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." <a href="#">Cell, 2008 May p536-548.</a>
<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>RefSeq:</b>	<a href="#">NM_004336.2</a> , <a href="#">NP_004327.1</a>
<b>RefSeq Size:</b>	3486 bp
<b>RefSeq ORF:</b>	3258 bp
<b>Locus ID:</b>	699
<b>UniProt ID:</b>	<a href="#">O43683</a>
<b>Cytogenetics:</b>	2q13
<b>Domains:</b>	pkinase, S_TKc
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Protein Pathways:</b>	Cell cycle, Oocyte meiosis, Progesterone-mediated oocyte maturation

**Gene Summary:**

This gene encodes a serine/threonine-protein kinase that play a central role in mitosis. The encoded protein functions in part by phosphorylating members of the mitotic checkpoint complex and activating the spindle checkpoint. This protein also plays a role in inhibiting the activation of the anaphase promoting complex/cyclosome. This protein may also function in the DNA damage response. Mutations in this gene have been associated with aneuploidy and several forms of cancer. Alternate splicing results in multiple transcript variants. [provided by RefSeq, Jul 2013]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.