

## Product datasheet for **SC116821**

### **GTF2H1 (NM\_005316) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GTF2H1 (NM_005316) Human Untagged Clone
Tag:	Tag Free
Symbol:	GTF2H1
Synonyms:	BTF2; P62; TFB1; TFIIH
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene ORF within SC116821 sequence for NM\_005316 edited (data generated by NextGen Sequencing)

```
ATGGCAACCTCATCTGAAGAAGTTTTGCTGATTGTAAAGAAAGTGCCTCAAAGAAGCAG
GATGGAGCTCTGTACCTCATGGCAGAAAGAATTGCTTGGGCACCTGAAGGCAAAGATAGA
TTTACAATCAGCCATATGTATGCAGATATTAATGCCAGAAAATTAGTCCAGAAGGAAAA
GCTAAAATTCAGCTTCAGCTGGTCTACATGCAGGGGACACAACCTAATCCATTTTTCC
AATGAAAGCACAGCAGTGAAGAGCGAGATGCAGTAAAAGACCTTCTTCAGCAGCTGCTG
CCCAAATTC AAGAGGAAAGCAAATAAAGAAGCTGGAAGAGAAGAACAAGAAATGCTGCAAGAA
GATCCTGTTTTGTTTCAGCTTTATAAAGACCTTGTGTGAGTCAAGTGATCAGTGCTGAG
GAATTCTGGGCAATCGTTTAAATGTGAATGCAACAGATAGTTCTTCCACATCCAATCAT
AAGCAGGATGTTGGCATTCTGCTGCATTTCTGGCTGATGTCGGCCCCAACTGATGGC
TGTAACGGTCTAAGATATAATTTAACTTCTGATATCATTGAGTCCATATTTAGGACCTAT
CCAGCAGTAAAAATGAAATATGCAGAAAATGTTCCCCACAACATGACAGAGAAGGAATTC
TGGACACGTTTTTCCAGTCCCATTATTTTCCAGGGATCGGCTGAATACAGGGTCAAAG
GATCTCTTTGCAGAATGTCCAAAATAGATGAAAAGGCCATAAAAACAATGGTTTCATTA
GGAGTGA AAAACCCACTACTAGATTTAACAGCTTTGGAAGATAAAACCATTAGATGAGGGC
TATGGCATTTCCTCTGTGCCATCTGCTTCCAATTC TAAATCCATAAAAAGAGAATAGTAAT
GCTGCCATCATCAAGAGATTTAACCATCACAGTGCCATGGTCTGGCAGCTGGACTCAGA
AAACAAGAAGCACAAAATGAACAAACTAGTGAGCCAGCAACATGGATGGAAATTCGGGA
GATGCAGACTGCTTTCAGCCAGCAGTCAAAGGGCGAAATTAACAAGATCCATTGAATAT
GAAGACTTGGGAAAAATAATCTGTAAAAACGATTGCACTAACCTCAAGAAAGTCAGAT
AGGTATTATCATGGTCCAACCTCAATCCAGTCACTACAGTATGCAACAAGTCAGGACATT
ATTAATCTTTTTCAAAGTATTAGACAAGAAATGGAAGCTTATACCCCAAGTTAACTCAG
GTTCTCTCAAGTAGTGCTGCCAGTAGTACCATCACAGCACTGTACCTGGAGGGCACTT
ATGCAGGGAGGAACACAGCAAGCCATAAAACCAGATGGTGCCAAATGATATTCAATCTGAA
TTGAAACACTTATATGTAGCTGTTGGAGAACTTCTACGACATTTCTGGTCTGCTTTCCT
GTTAATACGCCATTCTAGAAAGAAAAGGTAGTAAAATGAAAAGTAAATTTGGAACGATTC
CAAGTTACGAAGCTCTGTCCATTCCAAGAAAAGATTCCGGAGACAGTATTTAAGCACAAAAT
TTGGTAAGTCACATAGAAGAGATGCTCCAGACAGCCTACAACAAGCTCCACACATGGCAG
TCACGGCGTCTGATGAAGAAAACGTGA
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Clone variation with respect to NM\_005316.3

**5' Read Nucleotide Sequence:**

```
>OriGene 5' read for NM_005316 unedited
TGTAATACGACTCACTATAGGGCGGCCGAATTCGGCACGAGGGCGAAGGTGTCATGGC
GGCCGCGCTCCTGAGTCACGTGCCAGGGCCCGCTTGTACTTCCGGTCAAGTGCCTC
AGACTCCTCGCAGCCAGCGATGGAGGGCAGACCCCTAGTAACAGAGGGCGGTGGTACTG
CTGCGGCCACTGGGTTTCGGCCTTCCAGCAGCGGCTTAAGAAGCGCAGCGGAACTC
GACCGGATCCAACCCAGTTAGTTACTTCTGTCTAGAGTTGTAGCTTCCACCTGCACCTT
CTAGCCACCATGGCAACCTCATCTGAAGAAGTTTTGCTGATTGTAAAGAAAGTGCCTCAA
AAGAAGCAGGATGGAGCTCTGTACCTCATGGCAGAAAGAATTGCTTGGGCACCTGAAGGC
AAAGATAGATTTACAATCAGCCATATGTATGCAGATATTAATGCCAGAAAATTAGTCCA
GAAGGAAAAGCTAAAATTCAGCTTCAGCTGGTCTACATGCAGGGGACACAACCTTCTCAG
CATTTTTCCAATGAAAGCACAGCAGTGAAGAGCGAGATGCAGTAAAAGACCTTCTTCAG
CAGCTGCTGCCAAAATTC AAGAGGAAAGCAAATAAAGAAGCTGGAAGAGAAGAACAAGAAATG
CTGCAAGAAGATCCTGTTTTGTTTCAGCTNTATAAAGACCTTGTGTGAGTCAAGTGATC
AGTGCTGAGGAATTCTGGCCAATCNGTTAATGTGAAATGCACAGNNATAGTCTTACAT
NCAATCATAAGCANGATGTTGGCATTCTGCTGCATTTCTGGCTGATGTCGGGCCAACT
GATGGCTGTAACGGNCTAGAATAANTTAACTCTGATATCATGAGTCATATTTNAGACCT
ATCCGCGTAAAAG
```

<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_005316 unedited GACCGCGCCGCAATCTAAAGTCGAGTTTTTTTTTTTTTTTTTTTGGAGAAACATCTTTT ATTTCTTCTAAAAGGTGAAAATAAGATTTTTTTTAAATTTCTCACTCATAAGATTTTTAA ACTCTTAAAAATGCAATATCTTCTTTTCAAAGCACATGCCATCTTAAAAAATCTTAGCA ATGTACATTTGCACTCAAAGAAAAACATGCAGCGCCATTGTCTTCTGACAAAATTCTGCA TAAAAAACCCCTATGCGACTTTCTGCAAATATATTGCCTCTTTATTATTTCAGGGACTCCA AACCCAAAACATTCAAGTCAATATTTATCGTTTTCTTATTTCCGTAGGAAACACAGAACCA ATGATGTCTTCTGACAACGTGTTTCCTGATGGTTGAGCAACAGTCTCCCTTTGCTTTATTT TAAAGTACTTTTTTAACTTGCTGATGTAAGGTATAATTGGAATTCATTAATAACTTGAGG ATCCAATGGAGGGTGAAGAATGAAGGATGGAGGAGGAATACCTAAGGTCTACCCTGTGC CATAAACTTACGAAAAAATGTCCACCGAAAAACGACCCAAAAAACCTCAGATTTTAT CAAAGCCCTTTAAAAAGTGTTTTTTAACTTCTGAAACACCCTAATGTGAATCAAAG CACGCCCTGACCAACTGCAGTAAACAGTCTTTAAAATATATATGTCCATACCCATGCTC ATATCTTGCTGGGGCGTATATATATATATTGCCACCTAACCCATTGGGTTCTGTCTT AATTACCCACCACCATTAAACCCCTTCTTTCCTTTCACGCCTACAAGGGCCAAGACCA ATACCATCTATTTCTGGGAGTTGGGCGCAACATAAGTTTCTTATAACCTCTGCGAGGCC ACTCGCTTGGCTTGACGCCAGCTN
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_005316
<b>Insert Size:</b>	3180 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>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_005316.2</a> , <a href="#">NP_005307.1</a>
<b>RefSeq Size:</b>	2989 bp
<b>RefSeq ORF:</b>	1647 bp
<b>Locus ID:</b>	2965
<b>UniProt ID:</b>	<a href="#">P32780</a>
<b>Cytogenetics:</b>	11p15.1
<b>Domains:</b>	BSD
<b>Protein Families:</b>	Druggable Genome, Transcription Factors

**Protein Pathways:** Basal transcription factors, Nucleotide excision repair

**Gene Summary:** Component of the general transcription and DNA repair factor IIH (TFIIH) core complex, which is involved in general and transcription-coupled nucleotide excision repair (NER) of damaged DNA and, when complexed to CAK, in RNA transcription by RNA polymerase II. In NER, TFIIH acts by opening DNA around the lesion to allow the excision of the damaged oligonucleotide and its replacement by a new DNA fragment. In transcription, TFIIH has an essential role in transcription initiation. When the pre-initiation complex (PIC) has been established, TFIIH is required for promoter opening and promoter escape. Phosphorylation of the C-terminal tail (CTD) of the largest subunit of RNA polymerase II by the kinase module CAK controls the initiation of transcription.[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the shorter transcript. Sequence Note: The RefSeq transcript and protein were derived from transcript and genomic sequence to make the sequence consistent with the reference genome assembly. The extent of this RefSeq transcript is supported by transcript alignments.