

## Product datasheet for **RG201341**

### **GTF2H1 (NM\_005316) Human Tagged ORF Clone**

#### **Product data:**

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids                       |
| Product Name:             | GTF2H1 (NM_005316) Human Tagged ORF Clone |
| Tag:                      | TurboGFP                                  |
| Symbol:                   | GTF2H1                                    |
| Synonyms:                 | BTF2; P62; TFB1; TFIIH                    |
| Mammalian Cell Selection: | Neomycin                                  |
| Vector:                   | pCMV6-AC-GFP (PS100010)                   |
| E. coli Selection:        | Ampicillin (100 ug/mL)                    |



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**ORF Nucleotide Sequence:**

>RG201341 representing NM\_005316  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCAACCTCATCTGAAGAAGTTTGGCTGATTGTAAAGAAAGTGCCTCAAAGAAGCAGGATGGAGCTC  
 TGTACCTCATGGCAGAAAAGAAATTGCTTGGGCACCTGAAGGCAAAGATAGATTTACAATCAGCCATATGTA  
 TGCAGATATTAATGCCAGAAAATTAGTCCAGAAGGAAAAGCTAAAATTCAGCTTCAGCTGGTCCTACAT  
 GCAGGGGACACAATACTTCCATTTTTCCAATGAAAGCACAGCAGTGAAAGAGCGAGATGCAGTAAAAG  
 ACCTTCTCAGCAGCTGCTGCCAAATCAAGAGGAAAGCAAATAAAGAAGTGAAGAGAAGAACAAGAT  
 GCTGCAAGAAGATCCTGTTTTGTTTCAGCTTTATAAAGACCTGTTGTGAGTCAAGTGCAGTGCAGTGCAG  
 GAATTCGGGCAATCGTTTAAATGTGAATGCAACAGATAGTTCTCCACATCCAATCATAAGCAGGATG  
 TTGGCATTCTGCTGCATTTCTGGTGATGTCGGCCCCAAACTGATGGCTGTAACGGTCTAAGATATAA  
 TTTAACTTCTGATATCATTGAGTCCATATTTAGGACCTATCCAGCAGTAAAAATGAAATATGCAGAAAAT  
 GTTCCCCACAACATGACAGAGAAGGAATTCGGACACGTTTTTTCCAGTCCCATTATTTTACAGGGATC  
 GGCTGAATACAGGGTCAAAGGATCTCTTTGCAGAATGTGCCAAAATAGATGAAAAAGGCCTAAAAACAAT  
 GGTTCATTAGGAGTAAAAACCCACTACTAGATTTAACAGCTTTGGAAGATAAACCATTAGATGAGGGC  
 TATGGCATTTCCTCTGTGCCATCTGCTTCCAATCTAAATCCATAAAAAGAGAATAGTAATGCTGCCATCA  
 TCAAGAGATTTAACCATCACAGTCCATGGTCTGGCAGCTGGACTCAGAAAACAAGAAGCACAAAATGA  
 ACAAACTAGTGAGCCAGCAACATGGATGGAATTCGGGAGATGCAGACTGCTTTCAGCCAGCAGTCAA  
 AGGGCGAAATACAAGAGTCCATTGAATATGAAGACTTGGGAAAAATAATTCTGTAAAAACGATTGCAC  
 TAAACCTCAAGAAGTCAGATAGTATTATCATGGTCCAACCTCCAATCCAGTCACTACAGTATGCAACAAG  
 TCAGGACATTATTAATTCTTTTCAAAGTATTAGACAAGAAATGGAAGCTTATACACCCAAGTTAACTCAG  
 GTTCTCTCAAGTAGTGCTGCCAGTAGTACCATCACAGCACTGTACCTGGAGGGGCACTTATGCAGGGAG  
 GAACACAGCAAGCCATAAACAGATGGTGCCAAATGATATTCAATCTGAATTGAAACACTTATATGTAGC  
 TGTTGGAGAATTCTACGACATTTCTGGTCTGCTTCTGTTAATACGCCATTCTAGAAGAAAAGGTA  
 GTGAAAATGAAAAGTAATTTGGAACGATTCCAAGTTACGAAGCTCTGTCCATTCCAAGAAAAGATTCCGA  
 GACAGTATTTAAGCACAATTTGGTAAGTCACATAGAAGAGATGCTCCAGACAGCCTACAACAAGCTCCA  
 CACATGGCAGTCACGGCGTCTGATGAAGAAAACG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG201341 representing NM\_005316  
 Red=Cloning site Green=Tags(s)

MATSSEEVLLIVKKVRQKKQDQALYLMAERIAWAPEGKDRFTISHMYADIKCQKISPEGKAKIQLQLVLH  
 AGDTTNFHFHFNSTAVKERDAVKDLLQQLLPKFKRKANKLEEKNRMLQEDPVLFLYKDLVVSQVISA  
 EFWANRLNVNATDSSSTSNHKQDVGISAFLADVRPQTDGCNGLRYNLTSDIIESIFRTPAVKMKYAEN  
 VPHNMTEKEFWTRFFQSHYFHRDRLNTGSKDLFAECAKIDKGLKTMVSLGVKNPLLDLTALEDKPLDEG  
 YGISSVPSASNSKSIKENSNAAIKRFNHHSAMVLAAGLRKQEAQNEQTSEPSNMDGNSGDADCFQPAVK  
 RAKLQESIEYEDLGKNSVKTIALNLKSDRYHGHPTPIQSLQYATSQDIINSFQSIQEMEAYTPKLTQ  
 VLSSSAASSTITALSPGGALMQGGTQQAINQMVPNDIQSELKHLVAVGELLRHFWSFCFPVNTPFLEEKV  
 VKMKSNLERFQVTKLCPFQEKIRROYLSTNLVSHIEEMLQTAYNKLHTWQSRRLMKKT

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_005316

**ORF Size:** 1644 bp

**OTI Disclaimer:** 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](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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\\_005316.4](#)

**RefSeq Size:** 2989 bp

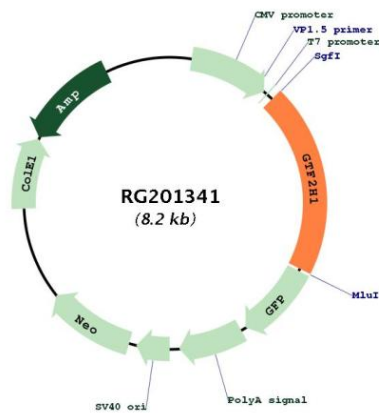
**RefSeq ORF:** 1647 bp

**Locus ID:** 2965

**UniProt ID:** [P32780](#)

|                          |  |
|--------------------------|--|
| <b>Cytogenetics:</b>     | 11p15.1  |
| <b>Domains:</b>          | BSD  |
| <b>Protein Families:</b> | Druggable Genome, Transcription Factors  |
| <b>Protein Pathways:</b> | Basal transcription factors, Nucleotide excision repair  |
| <b>Gene Summary:</b>     | 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] |

**Product images:**



Circular map for RG201341