

Product datasheet for **RR208291**

Gtf2h2 (NM_001077428) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
 Product Name: Gtf2h2 (NM_001077428) Rat Tagged ORF Clone
 Tag: Myc-DDK
 Symbol: Gtf2h2
 Synonyms: BTF2 p44
 Vector: pCMV6-Entry (PS100001)
 E. coli Selection: Kanamycin (25 ug/mL)
 Cell Selection: Neomycin
 ORF Nucleotide Sequence: >RR208291 representing NM_001077428
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGATGAAGAACCTGAAAGAATAAGCGGTGGGAAGGAGGCTATGAGAGAACCTGGGAAATTCCTAAAG
 AAGATGAAAGTGGATCACTTAAAGCTACAATAGAGGATATTCTCTTCAAGGCAAAGAGGAAAAGAGTGTT
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 GACTGAACTCTCAGGAAACCCAAGGAAACACATAACATCTTTGAAGAAAGCTGTAGATATGACCTGCCAT
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 GCAGAGAAGTGCTCATCATCTTCAGCAGCCTCACGACCTGTGACCCCTCTAATATTTATGACCTCATCAA
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 CTTGCTCGAGAACTGGTGGCACATACCACGTCATCCTAGATGAGACCCATTACAAGGAGCTGTTAGCCC
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 TACCATTGCCTCTGTCTGATCAGGATGCAAACCATCCTTCAGCATGGCGCATTGGATAATAATAGC
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 TCCTTTGGATGCTTTTCAAGAAATCCCCCTGGAAGAATAAAAGGAGAGAGGTTTTGTTATGGATGTCAG
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
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Protein Sequence: >RR208291 representing NM_001077428
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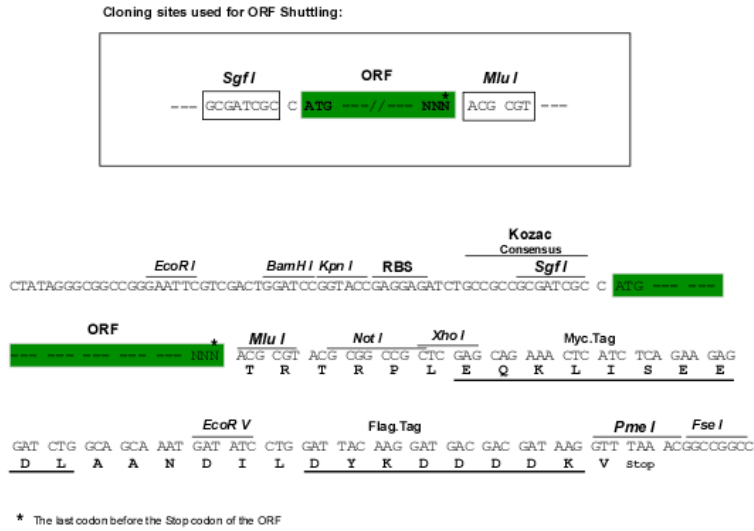
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 MEDQDLKPNRLTCTLKLLLEYFVEEYFDQNPISQIGIIVTKSKRAEKLTELSGNPRKHITSLKKAVDMTCH
 GEPSLYNSLSMAMQTLKHMPGHTSREVLIIIFSSLTTCDPNSNIYDLIKTLKTAKIRVSVIGLSAEVRVCTV
 LARETGTTYHVILDETHYKELLARHVSPPPASSGSECSLIRMGFPQHTIASLSDQDAKPSFSMAHLDNNS
 TEPGLTLGGYFCPQCRAKYCEL PVECKICGLTLVSAPHLARSYHHLFPLDAFQEIPLEEYKGERFCYGCQ
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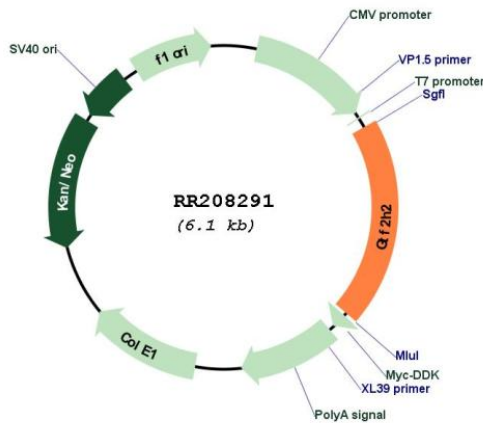
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001077428

ORF Size:	1188 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:	<ol style="list-style-type: none">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_001077428.1 , NP_001070896.1
RefSeq Size:	1394 bp
RefSeq ORF:	1191 bp
Locus ID:	294693
UniProt ID:	A0JN27
Cytogenetics:	2q12
MW:	44.7 kDa
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. The N-terminus of GTF2H2 interacts with and regulates XPD whereas an intact C-terminus is required for a successful escape of RNAP II from the promoter.[UniProtKB/Swiss-Prot Function]