

## Product datasheet for **RG237152**

### ATF5 (NM\_001290746) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ATF5 (NM_001290746) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ATF5
Synonyms:	ATFX; HMFN0395
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG237152 representing NM_001290746. Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGTCACTCCTGGCGACCCTGGGGCTGGAGCTGGACAGGGCCCTGCTCCCAGCTAGTGGGCTGGGATGG
CTCGTAGACTATGGGAACTCCCCCGGCCCTGCCCCCTGGCTCCCTATGAGGTCCTGGGGGAGCC
CTGGAGGGCGGGCTTCCAGTGGGGGAGAGCCCTGGCAGGTGATGGCTTCTGACTGGATGACTGAG
CGAGTTGATTTACAGCTCTCCTCCCTCTGGAGCCTCCCTACCCCGGCACCCTCCCCAACCTTCC
CCAACCCACCTGACCTGGAAGCTATGGCCTCCCTCCTCAAGAAGGAGCTGGAACAGATGGAAGACTTC
TTCTAGATGCCCGGCCCTCCACCACCCTCCCGCCGCACTACCACCACCACCCTACCACCAGCC
CCCTCCCTCCCGCTGTCCCTCCCTCCTTTGACCTCCCGAGCCCTGTCTGGATACTCTGGACTTG
CTGGCCATCTACTGCCGCAACGAGGCGGGCAGGAGGAAGTGGGGATGCCGCCTCTGCCCGCCACAG
CAGCCCCCTCCTCTTCCACCTCAACCTTCTCGCCTGGCCCCCTACCCACATCCTGCCACCACCCGA
GGGACCAGCAAGCAAAGAAGAGAGACCAGAACAAGTCGGCGGCTCTGAGGTACCGCCAGCGGAAGCGG
GCAGAGGGTGAGGCCCTGGAGGGCGAGTGCCAGGGGCTGGAGGCACGGAATCGCGAGCTGAAGGAACGG
GCAGAGTCCGTGGAGCGGAGATCCAGTACGTCAAGGACCTGCTCATCGAGGTTTACAAGCCCCGGAGC
CAGAGGACCCGTAGCTGC
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```



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**Protein Sequence:** >Peptide sequence encoded by RG237152  
 Blue=ORF Red=Cloning site Green=Tag(s)

MSLLATLGLELDRALLPASGLGWLVDYGLKPPAPAPLAPYEVLGGALEGGLPVGGEPLAGDGFSDWMTE  
 RVDFTALLPLEPPLPPGTLQPSPPTPDLEAMASLLKKELEQMEDFFLDAPLPPPSPPPLPPPPLPPA  
 PSLPLSLPSFDLPQPPVLDLTLDAIYCRNEAGQEEVGMPPPLPPQPPPPSPPQPSRLAPYHPATTR  
 GDRKQKKRDQNKSAALRYRQRKRAEGEALGECQGLEARNRELKERAESVEREIQYVKDLLIEVYKARS  
 QRTRSC

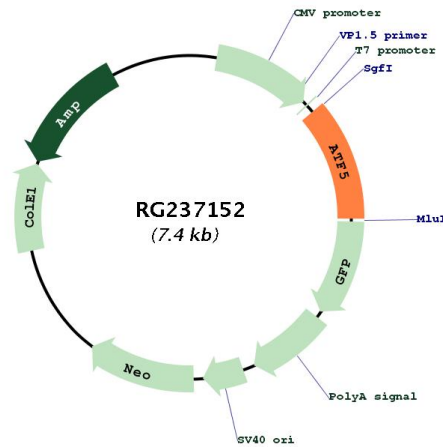
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMKSTKGALTFSPYLLSHV  
 MGYGFYHFGTYPSTYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPEP  
 SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMHFKSAIHPSILQNGGPMFA  
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_001290746

<b>ORF Size:</b>	846 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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>RefSeq:</b>	<a href="#">NM_001290746.1</a> , <a href="#">NP_001277675.1</a>
<b>RefSeq Size:</b>	2059 bp
<b>RefSeq ORF:</b>	849 bp
<b>Locus ID:</b>	22809
<b>UniProt ID:</b>	<a href="#">Q9Y2D1</a>
<b>Cytogenetics:</b>	19q13.33
<b>Protein Families:</b>	Transcription Factors
<b>MW:</b>	31.1 kDa

**Gene Summary:**

Transcription factor that either stimulates or represses gene transcription through binding of different DNA regulatory elements such as cAMP response element (CRE) (consensus: 5'-GTGACGT[AC][AG]-3'), ATF5-specific response element (ARE) (consensus: 5'-C[CT]TCT[CT]CCTT[AT]-3') but also the amino acid response element (AARE), present in many viral and cellular promoters. Critically involved, often in a cell type-dependent manner, in cell survival, proliferation, and differentiation (PubMed:10373550, PubMed:15358120, PubMed:21212266, PubMed:20654631). Its transcriptional activity is enhanced by CCND3 and slightly inhibited by CDK4 (PubMed:15358120). Important regulator of the cerebral cortex formation, functions in cerebral cortical neuroprogenitor cells to maintain proliferation and to block differentiation into neurons. Must be down-regulated in order for such cells to exit the cycle and differentiate (By similarity). Participates in the pathways by which SHH promotes cerebellar granule neuron progenitor cells proliferation (By similarity). Critical for survival of mature olfactory sensory neurons (OSN), directs expression of OSN-specific genes (By similarity). May be involved in osteogenic differentiation (PubMed:22442021). Promotes cell proliferation and survival by inducing the expression of EGR1 synergistically with ELK1. Once acetylated by EP300, binds to ARE sequences on target genes promoters, such as BCL2 and EGR1 (PubMed:21791614). Plays an anti-apoptotic role through the transcriptional regulation of BCL2, this function seems to be cell type-dependent (By similarity). Cooperates with NR1H3/CAR in the transcriptional activation of CYP2B6 in liver (PubMed:18332083). In hepatic cells, represses CRE-dependent transcription and inhibits proliferation by blocking at G2/M phase (PubMed:22528486, PubMed:18701499). May act as a negative regulator of IL1B transduction pathway in liver (PubMed:24379400). Upon IL1B stimulus, cooperates with NLK to activate the transactivation activity of C/EBP subfamily members (PubMed:25512613). Besides its function of transcription factor, acts as a cofactor of CEBPB to activate CEBPA and promote adipocyte differentiation (PubMed:24216764). Regulates centrosome dynamics in a cell-cycle- and centriole-age-dependent manner. Forms 9-foci symmetrical ring scaffold around the mother centriole to control centrosome function and the interaction between centrioles and pericentriolar material (PubMed:26213385).[UniProtKB/Swiss-Prot Function]