

Product datasheet for **RG230676**

AF4 (AFF1) (NM_001166693) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AF4 (AFF1) (NM_001166693) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	AFF1
Synonyms:	AF4; MLLT2; PBM1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG230676 representing NM_001166693 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCATTACAGAAAGAGTCAACAGCAGTGGCAACAGTTTGTACAATGACGACAGAAACCTGCTTCGAA
TTAGAGAGAAGGAAAGACGCAACCAGGAAGCCACCAAGAGAAAGAGGCATTTCTGAAAAGATCCCT
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TGGGAAAGCCGAAATATCCTTTAATTCTGACAAAGGGAGCAGCATTCCATCCAGCTCCTCCACACTAG
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GAGAGCGAGAGCAGTTCAAGTGACAGCGAAGAAAATGAGCCCCTAGAAACCCAGCTCCGGAGCCTGAGC
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TAACCAAAACACCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG230676 representing NM_001166693
 Red=Cloning site Green=Tags(s)

MAFTERVNSSGNSLYNDDRNLRLIREKERRNQEAHQEKEAFPEKIPLFGEPYKTAKGDELSSRIQNMLGN
 YEEVKEFLSTKSHTHRLDASENRLGPKYPLIPDKGSSIPSSSFHTSVHHQSIHTPASGPLSVGNI SHNP
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 LPSPVPLSPIHNSQQTLPRTQGSKVKHGSSNNSKGYCPAKSPKDLAVKVHDKETPQDSL VAPAQPPSQT
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 EDRTPEHFALVPLTESQPPHSGSGSRTSGCRQAVVVQEDSRKDRLPLPLRDTKLLSPLRDTPPPQSLMV
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 KSQSSSSSSSHKESKTKPSRPSQSSKKEMLPPPVSSSSQKPAKPAKRSRREADTCGQDPPKASST
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 MKQKAELMTDRVGKAFKYLEAVLSFIECGIATESSESQSSKSAYSVYSETVDLIKFIIMSLKSFSDATPTQ
 EKIFAVLCMRQCSILNMAMFRCKKDIAIKYSRTL NKHFESSSKVAQAPSPCIARSTGTPSPLSPMPSPAS
 SVGSQSSAGSVGSSGVAATISTPVTIQNMTSSVYVITISHVLTAFDLWEQAEALTRKNKEFFARLSTNVCT
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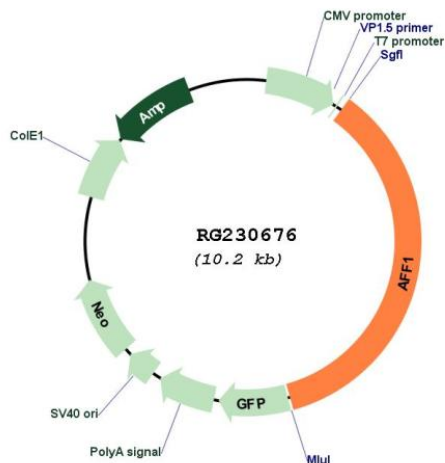
TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_001166693

ORF Size: 3654 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_001166693.2](#), [NP_001160165.1](#)

RefSeq Size: 9285 bp

RefSeq ORF: 3657 bp

Locus ID: 4299

UniProt ID: [P51825](#)

Cytogenetics: 4q21.3-q22.1

Protein Families: Transcription Factors

Gene Summary: This gene encodes a member of the AF4/ lymphoid nuclear protein related to the Fragile X E syndrome (FRAXE) family of proteins, which have been implicated in human childhood lymphoblastic leukemia, fragile chromosome X intellectual disability, and ataxia. It is the prevalent mixed-lineage leukemia fusion gene associated with spontaneous acute lymphoblastic leukemia. Members of this family have three conserved domains: an N-terminal homology domain, an AF4/ lymphoid nuclear protein domain, and a C-terminal homology domain. The protein functions as a regulator of RNA polymerase II-mediated transcription through elongation and chromatin remodeling functions. Through RNA interference screens, this gene has been shown to promote the expression of CD133, a plasma membrane glycoprotein required for leukemia cell survival. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2017]