

Product datasheet for **RC215889**

FTO (NM_001080432) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	FTO (NM_001080432) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	FTO
Synonyms:	ALKBH9; BMIQ14; GDFD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC215889 representing NM_001080432
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAAGCGCACCCCGACTGCCGAGGAACGAGAGCGCGAAGCTAAGAACTGAGGCTTCTGAAGAGCTTG
 AAGACACTTGGCTCCCTTATCTGACCCCAAAGATGATGAATTCTATCAGCAGTGGCAGCTGAAATATCC
 TAAACTAATTCTCCGAGAAGCCAGCAGTGTATCTGAGGAGCTCCATAAAGAGGTTCAAGAAGCCTTTCTC
 ACACTGCACAAGCATGGCTGCTTATTTCCGGACCTGGTTAGGATCCAAGGCAAAGATCTGCTCACTCCGG
 TATCTCGCATCTCATTGGTAATCCAGGCTGCACCTACAAGTACCTGAACACCAGGCTCTTACGGTCCC
 CTGGCCAGTAAAAGGGTCTAATAAAAACACACCGAGGCTGAAATAGCCGCTGCTGTGAGACCTTCTC
 AAGCTCAATGACTACCTGCAGATAGAAACCATCCAGGCTTGGAGAAGTGTGCCAAAGAGAAGGCTA
 ATGAGGATGCTGTGCCATTGTGTATGTCTGCAGATTTCCCGAGGTTGGGATGGGTTTCATCTACAACGG
 ACAAGATGAAGTGGACATTAAGAGCAGAGCAGCATACAACGTAACCTTGTGAATTTTCATGGATCCTCAG
 AAAATGCCATACCTGAAAGAGGAACCTTATTTGGCATGGGAAAATGGCAGTGAAGTGGATCATGATG
 AAAATCTGGTGGACAGGTGAGCGGTGGCAGTGTACAGTTATAGCTGTGAAGGCCCTGAAGAGGAAAGTGA
 GGATGACTCTCATCTCGAAGGCAGGGATCCTGATATTTGGCATGTTGGTTTTAAGATCTCATGGGACATA
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 AATGATGATGCTCTTTGAAATCCTTTGAGCCTGCAGTTTGAACAAGGAGAAGAAATTCATAATGAGG
 TCGAGTTGAGTGGCTGAGGCAGTTTTGGTTTCAAGGCAATCGATACAGAAAGTGCAGTACTGGTGGTG
 TCAACCCATGGCTCAACTGGAAGCACTGTGGAAGAAGATGGAGGGTGTGACAAATGCTGTGCTTCATGAA
 GTTAAAAGAGAGGGGCTCCCGTGAACAAGGAATGAAATCTTGACTGCCATCCTTGCCTCGCTCACTG
 CACGCCAGAACCTGAGGAGAGAATGGCATGCCAGGTGCCAGTACGAAATTGCCCGAACATTACCTGCTGA
 TCAGAAGCCAGAATGTCGGCCATACTGGGAAAAGGATGATGCTTCGATGCCTCTGCCGTTTACCTCACA
 GACATCGTTTCAGAACTCAGAGGTCAGCTTCTGGAAGCAAACCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC215889 representing NM_001080432
 Red=Cloning site Green=Tags(s)

MKRTPTAEEREREAKKLRLLEELEDTWLPYLTPKDFEFYQQWQLKYPKILREASSVSEELHKEVQEAF
 TLHKHGCLFRDLVRIQKDLLTPVSRILIGNPGCTYKYLNTRLFTVPWPVKGSNIKHTAEIAAACETFL
 KLNDYLQIETIQALEELAAKEKANEDAVPLCMSADFPRVGMGSSYNGQDEVDIKSRAAYNVTLNFMDPQ
 KMPYLKEEYPFGMGMAVSWHHDENLVDRSAVAVYSYCEGPEEESDSSHLEGRDPDIWHVGFKISWDI
 ETPGLAIPLHQDCYFMLDDLNATHQHCVLQAGSQRFSSTHRVAECSTGTLDYILQRCQLALQNVCDVD
 NDDVSLKSFEPVAVLKQGEIHNVEFEWLRQFWFQGNRYRKTDDWQCQPMQLEALWKKMEGVTNAVLHE
 VKREGLPVEQRNEILTAIASLTARQNLRREWHARCQSRIARTLPADQKPECRPYWEKDDASMPDPDLT
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

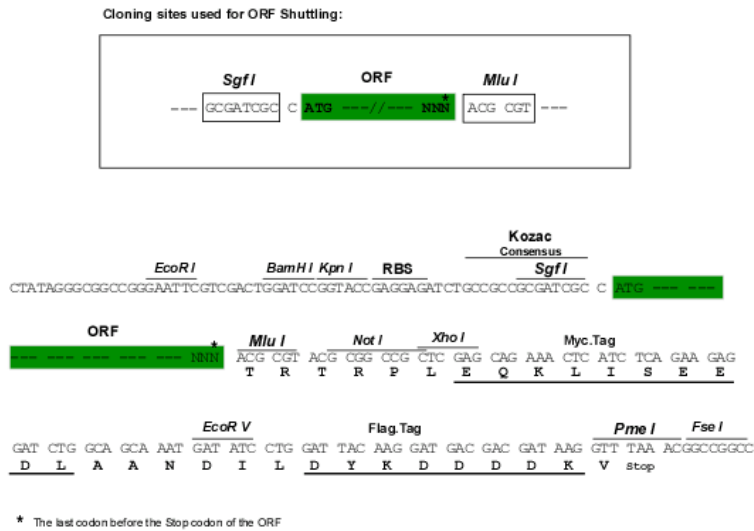
Chromatograms:

https://cdn.origene.com/chromatograms/mg3672_a05.zip

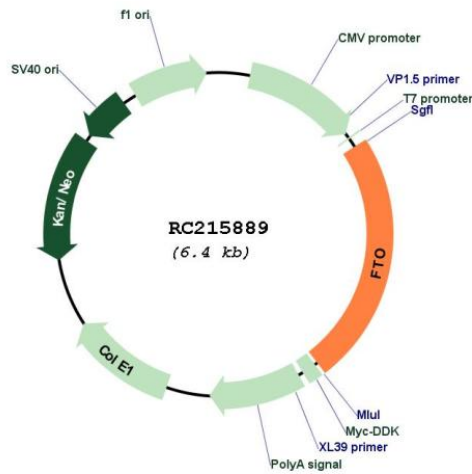
Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



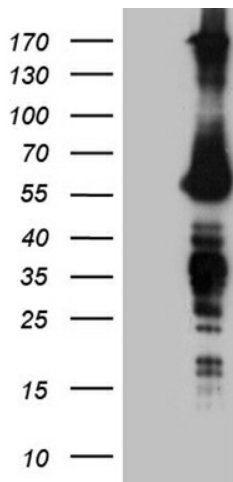
Plasmid Map:



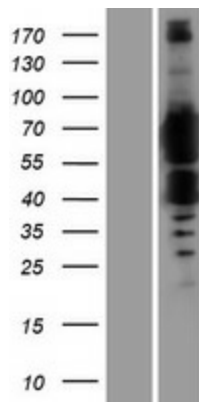
ACCN:

NM_001080432

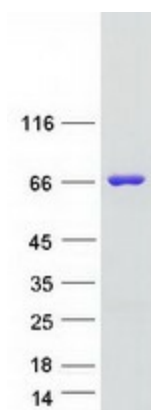
ORF Size:	1515 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. 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_001080432.3
RefSeq Size:	4294 bp
RefSeq ORF:	1518 bp
Locus ID:	79068
UniProt ID:	Q9C0B1
Cytogenetics:	16q12.2
MW:	58.1 kDa
Gene Summary:	This gene is a nuclear protein of the AlkB related non-haem iron and 2-oxoglutarate-dependent oxygenase superfamily but the exact physiological function of this gene is not known. Other non-heme iron enzymes function to reverse alkylated DNA and RNA damage by oxidative demethylation. Studies in mice and humans indicate a role in nervous and cardiovascular systems and a strong association with body mass index, obesity risk, and type 2 diabetes. [provided by RefSeq, Jul 2011]

Product images:


HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY FTO (Cat# RC215889, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-FTO (Cat# [TA809392])(1:2000). Positive lysates [LY421649] (100ug) and [LC421649] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY421649]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC215889 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified FTO protein (Cat# [TP315889]). The protein was produced from HEK293T cells transfected with FTO cDNA clone (Cat# RC215889) using MegaTran 2.0 (Cat# [TT210002]).