

## 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)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC215889 representing NM\_001080432  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGAAGCGCACCCCGACTGCCGAGGAACGAGAGCGCGAAGCTAAGAACTGAGGCTTCTGAAGAGCTTG  
 AAGACACTTGGCTCCCTTATCTGACCCCAAAGATGATGAATTCTATCAGCAGTGGCAGCTGAAATATCC  
 TAAACTAATTCTCCGAGAAGCCAGCAGTGTATCTGAGGAGCTCCATAAAGAGGTTCAAGAAGCCTTTCTC  
 ACACTGCACAAGCATGGCTGCTTATTTCCGGACCTGGTTAGGATCCAAGGCAAAGATCTGCTCACTCCGG  
 TATCTCGCATCCTCATTGGTAATCCAGGCTGCACCTACAAGTACCTGAACACCAGGCTCTTACGGTCCC  
 CTGGCCAGTAAAAGGGTCTAATAAAAACACACCGAGGCTGAAATAGCCGCTGCTGTGAGACCTTCTC  
 AAGCTCAATGACTACCTGCAGATAGAAACCATCCAGGCTTTGGAAGAAGTGTGCCAAAGAGAAGGCTA  
 ATGAGGATGCTGTGCCATTGTGTATGTCTGCAGATTTCCCGAGGTTGGGATGGGTTTCATCTACAACGG  
 ACAAGATGAAGTGGACATTAAGAGCAGAGCAGCATACAACGTAACCTTTGCTGAATTTTCATGGATCCTCAG  
 AAAATGCCATACCTGAAAGAGGAACCTTATTTTGGCATGGGAAAATGGCAGTGAAGTGGATCATGATG  
 AAAATCTGGTGGACAGGTGAGCGGTGGCAGTGTACAGTTATAGCTGTGAAGGCCCTGAAGAGGAAAAGTGA  
 GGATGACTCTCATCTCGAAGGCAGGGATCCTGATATTTGGCATGTTGGTTTTAAGATCTCATGGGACATA  
 GAGACACCTGGTTTGGCGATACCCCTTCAACAAGGAGACTGCTATTTTCATGCTTGATGATCTCAATGCCA  
 CCCACCAACACTGTGTTTTGGCCGGTCCACAACCTCGGTTTAGTCCACCACCGAGTGGCAGAGTGTCTC  
 AACAGGAACCTTGGATTATTTTACAACGCTGTCAAGTGGCTCTGCAGAATGTCTGTGACGATGTGGAC  
 AATGATGATGCTCTTTGAAATCCTTTGAGCCTGCAGTTTGAACAAGGAGAAGAAATTCATAATGAGG  
 TCGAGTTTGAAGTGGCTGAGGCAGTTTTGGTTTTCAAGGCAATCGATACAGAAAGTGCAGTACTGGTGGTG  
 TCAACCCATGGCTCAACTGGAAGCACTGTGGAAGAAGATGGAGGGTGTGACAAATGCTGTGCTTCATGAA  
 GTTAAAAGAGAGGGGCTCCCGTGAACAAGGAATGAAATCTTGACTGCCATCCTTGCCTCGCTCACTG  
 CACGCCAGAACCTGAGGAGAGAATGGCATGCCAGGTGCCAGTACGAAATTGCCCGAACATTACCTGCTGA  
 TCAGAAGCCAGAATGTCGGCCATACTGGGAAAAGGATGATGCTTCGATGCCTCTGCCGTTTGACCTCACA  
 GACATCGTTTCAGAACTCAGAGGTCAGCTTCTGGAAGCAAACCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC215889 representing NM\_001080432  
 Red=Cloning site Green=Tags(s)

MKRTPTAEEREREAKKLRLLEELEDTWLPYLTPKDFEFYQQWQLKYPKILREASSVSEELHKEVQEAF  
 TLHKHGCLFRDLVRIQKDLLTPVSRILIGNPGCTYKYLNTRLFTVPWPVKGSNIKHTAEIAAACETFL  
 KLNDYLQIETIQALEELAAKEKANEDAVPLCMSADFPRVGMGSSYNGQDEVDIKSRAAYNVTLNFMDPQ  
 KMPYLKEEYPFGMKMAVSWHHDENLVDRSAVAVYSYCEGPEEESDSSHLEGRDPDIWHVGFKISWDI  
 ETPGLAIPLHQGDCYFMLDDLNATHQHCVLQAGSQRFSSTHRVAECSTGTLDYILQRCQLALQNVCDVD  
 NDDVSLKSFEPVAVLKQGEIHNVEFEWLRQFWFQGNRYRKTDDWQCQPMQLEALWKKMEGVTNAVLHE  
 VKREGLPVEQRNEILTAI LASL TARQNL RREWHARCQSRIARTLPADQKPECRPYWEKDDASMPDPDLT  
 DIVSELRGQLLEAKP

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mg3672\\_a05.zip](https://cdn.origene.com/chromatograms/mg3672_a05.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**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:**
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

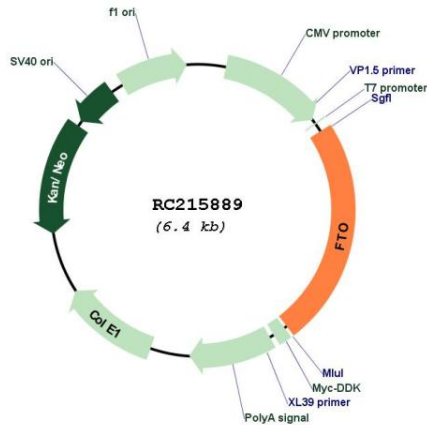
**UniProt ID:** [Q9C0B1](#)

**Cytogenetics:** 16q12.2

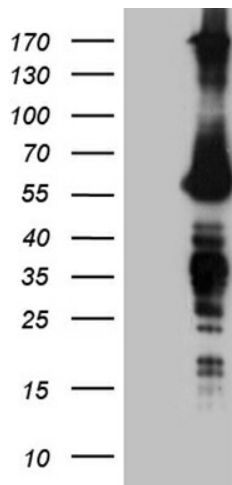
**MW:** 58.1 kDa

**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]

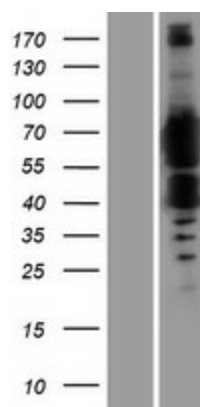
**Product images:**



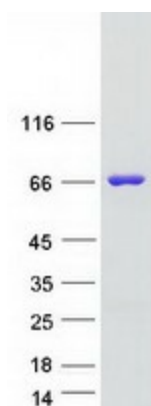
Circular map for RC215889



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 un-transfected 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]).