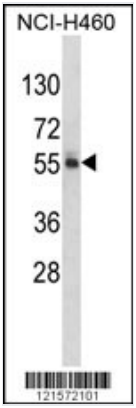
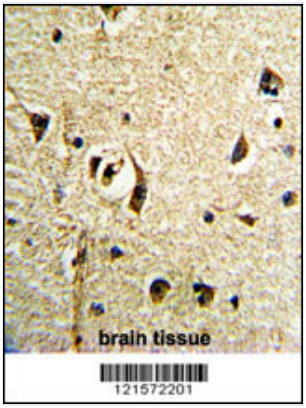
FTO Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

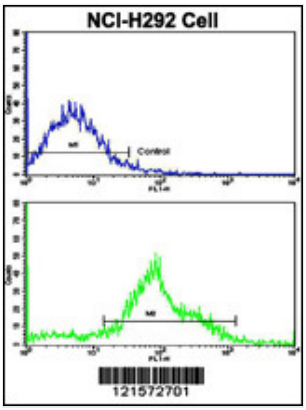
Product Name	FTO, Polyclonal Antibody
Full Product Name	FTO Antibody (N-term)
Product Gene Name	anti-FTO antibody
Product Synonym Names	Alpha-ketoglutarate-dependent dioxygenase FTO; 11411-; Fat mass and obesity-associated protein; FTO; KIAA1752
Clonality	Polyclonal
Isotype	Rabbit Ig
Host	Rabbit
Species Reactivity	Human
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Purity/Purification	Peptide Affinity Purified Rabbit Polyclonal Antibody (Pab)
Concentration	Vial Concentration: 0.5 (lot specific)
Specificity	This FTO antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human FTO.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.
Antibody/Peptide Pairs	FTO peptide (MBS9226463) is used for blocking the activity of FTO antibody (MBS9211884)
Molecular Weight	58282
Immunogen Sequence Positions	1-30
OMIM	610966
3D Structure	ModBase 3D Structure for Q9C0B1
Antigen Type	Synthetic Peptide
Antigen Source	HUMAN
Product Categories/Family for anti-FTO antibody	Cardiovascular; Metabolism; Neuroscience
Applications Tested/Suitable for anti-FTO antibody	Western Blot (WB), ELISA (EIA), Immunohistochemistry (IHC), Flow Cytometry (FC/FACS)
Application Notes for anti-FTO antibody	WB~~1:1000
Related Product Information for anti-FTO antibody	MBS9211884 is an antibody targeting FTO. Also known as FTO Antibody (N-term). Reactive in Human. Host: Rabbit. The precise function of FTO remains to be determined.
Product References and Citations for anti-FTO antibody	Scott,L.J., et.al., Science 316 (5829), 1341-1345 (2007)
Other Notes	Small volumes of anti-FTO antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Western Blot (WB) of anti-FTO antibody
Western blot analysis of FTO Antibody (N-term) in NCI-H460 cell line lysates (35ug/lane). FTO (arrow) was detected using the purified Pab.



Immunohistochemistry (IHC) of anti-FTO antibody
Formalin-fixed and paraffin-embedded human brain tissue reacted with FTO Antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow Cytometry (FC/FACS) of anti-FTO antibody
Flow cytometric analysis of NCI-H292 cells using FTO Antibody (N-term)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for FTO. It may not necessarily be applicable to this product.

NCBI GI #	122937263
NCBI GeneID	79068
NCBI Accession #	NP_001073901.1
UniProt Primary Accession #	Q9C0B1
UniProt Secondary Accession #	Q0P676; Q7Z785; A2RUH1; B2RNS0
UniProt Related Accession #	Q9C0B1
GenBank Nucleotide #	NM_001080432.2
NCBI Official Full Name	alpha-ketoglutarate-dependent dioxygenase FTO
NCBI Official Synonym Full Names	fat mass and obesity associated
NCBI Official Symbol	FTO
NCBI Official Synonym Symbols	ALKBH9
UniProt Protein Name	Alpha-ketoglutarate-dependent dioxygenase FTO
UniProt Synonym Protein Names	Fat mass and obesity-associated protein

Protein Family	Alpha-ketoglutarate-dependent dioxygenase
UniProt Gene Name	FTO
UniProt Synonym Gene Names	KIAA1752
UniProt Entry Name	FTO_HUMAN
NCBI Protein Information	alpha-ketoglutarate-dependent dioxygenase FTO
NCBI Summary for FTO	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]
UniProt Comments for FTO	FTO: Dioxygenase that repairs alkylated DNA and RNA by oxidative demethylation. Has highest activity towards single- stranded RNA containing 3-methyluracil, followed by single- stranded DNA containing 3-methylthymine. Has low demethylase activity towards single-stranded DNA containing 1-methyladenine or 3-methylcytosine. Has no activity towards 1-methylguanine. Has no detectable activity towards double-stranded DNA. Requires molecular oxygen, alpha-ketoglutarate and iron. Contributes to the regulation of the global metabolic rate, energy expenditure and energy homeostasis. Contributes to the regulation of body size and body fat accumulation. Defects in FTO are the cause of growth retardation developmental delay coarse facies and early death (GDFD). A severe polymalformation syndrome characterized by postnatal growth retardation, microcephaly, severe psychomotor delay, functional brain deficits and characteristic facial dysmorphism. In some patients, structural brain malformations, cardiac defects, genital anomalies, and cleft palate are observed. Early death occurs by the age of 3 years. Belongs to the fto family. 4 isoforms of the human protein are produced by alternative splicing. Protein type: EC 1.14.11.- Chromosomal Location of Human Ortholog: 16q12.2 Cellular Component: nuclear speck; nucleus Molecular Function: ferrous iron binding; DNA-N1-methyladenine dioxygenase activity Biological Process: DNA dealkylation; RNA repair; regulation of multicellular organism growth; thermoregulation Disease: Growth Retardation, Developmental Delay, Coarse Facies, And Early Death
Research Articles on FTO	**1.** No association found between obesity and rs1421085 and rs9939609 polymorphisms of FTO gene.
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Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

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