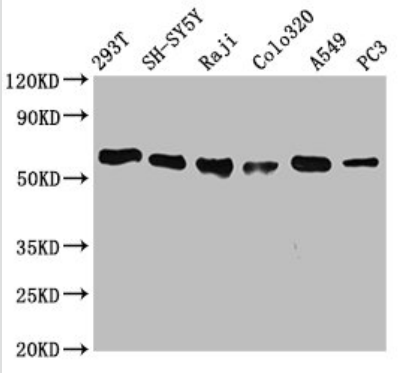
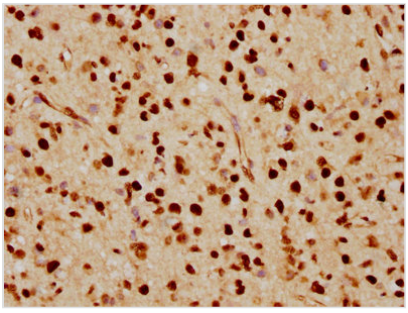
FTO Antibody

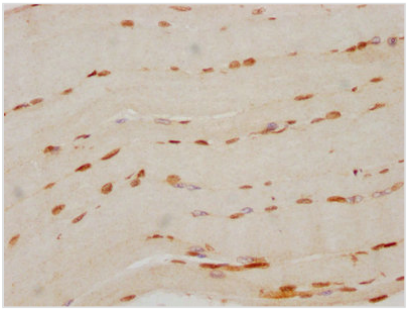
Product Code	CSB-RA880154A0HU
Abbreviation	Alpha-ketoglutarate-dependent dioxygenase FTO
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q9C0B1
Immunogen	A synthesized peptide derived from human FTO
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC, IF; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IF:1:20-1:200
Relevance	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 (PubMed:18775698, PubMed:20376003). Specifically demethylates N(6)-methyladenosine (m6A) RNA, the most prevalent internal modification of messenger RNA (mRNA) in higher eukaryotes (PubMed:22002720, PubMed:26458103). 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 (PubMed:18775698, PubMed:20376003). In particular, it is involved in the regulation of thermogenesis and the control of adipocyte differentiation into brown or white fat cells (PubMed:26287746).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Alpha-ketoglutarate-dependent dioxygenase FTO, Fat mass and obesity-associated protein, FTO, KIAA1752
Immunogen Species	Homo sapiens (Human)
Research Area	Neuroscience
Gene Names	FTO
Accession NO.	4G9
Image	



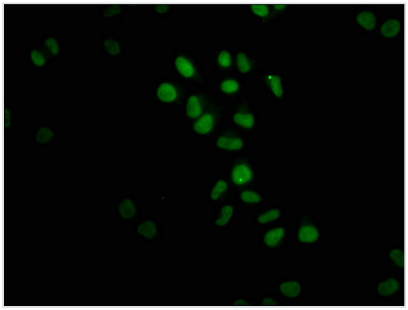
Western Blot
Positive WB detected in: 293T whole cell lysate, SH-SY5Y whole cell lysate, Raji whole cell lysate, Colo320 whole cell lysate, A549 whole cell lysate, PC3 whole cell lysate
All lanes: FTO antibody at 0.7µg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 59, 15, 7, 13 KDa
Observed band size: 59 KDa



IHC image of CSB-RA880154A0HU diluted at 1:70 and staining in paraffin-embedded human glioma cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



IHC image of CSB-RA880154A0HU diluted at 1:70 and staining in paraffin-embedded human skeletal muscle tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



Immunofluorescence staining of Hela cells with CSB-RA880154A0HU at 1:23, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG (H+L).

Description

CUSABIO cloned FTO antibody-coding genes into plasma vectors and then transfected these vector clones into mammalian cells using a lipid-based transfection reagent. Following transient expression, the recombinant antibodies against FTO were harvested and characterized. The recombinant FTO antibody was purified by affinity-chromatography from the culture medium. It can be used to detect FTO protein from Human in the ELISA, WB, IHC, IF.

FTO, a dependent oxygenase related to 2-exoglotarate, is linked to various physiological functions, including the regulation of food intake and energy balance, body weight modulation, adipogenesis, and DNA methylation. FTO gene polymorphism is linked to higher body mass index (BMI), weight, and belly circumference. It has been reported that FTO is related to growth retardation, developmental delay, facial dysmorphism, and body mass index quantitative Trait Locus 14.