

Recombinant FTO protein

Catalog No: 31572, 31972

Lot No: 19317002

Expressed In: Baculovirus

Quantity: 20, 1000 µg

Concentration: 0.3 µg/µl

Source: Human

Buffer Contents: Recombinant FTO protein is supplied at a concentration of 0.3 µg/µl in 25 mM HEPES pH 7.5, 300 mM NaCl, 5% glycerol, 0.04% Triton X-100, 0.2 mM TCEP.

Background: FTO (Alpha-Ketoglutarate Dependent Dioxygenase, also known as GDFD, ALKBH9, BMIQ14) is a nuclear protein of the AlkB related non-haem iron and 2-oxoglutarate-dependent oxygenase superfamily. FTO specifically demethylates m6A RNA. FTO plays an important role in the regulation of the global metabolic rate, energy expenditure and energy homeostasis. It is involved in the regulation of thermogenesis and the control of adipocyte differentiation into brown or white fat cells.

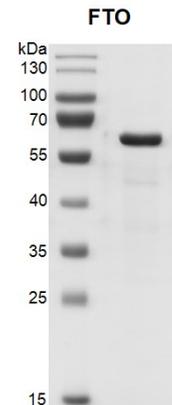
Protein Details: Recombinant FTO protein was expressed in a Baculovirus expression system as the full length protein (accession number XP_011521615.1) with an N-terminal FLAG-Tag. The molecular weight of FTO is 60.4 kDa.

Application Notes: Recombinant FTO protein is suitable for use in enzyme kinetics, inhibitor screening, and selectivity profiling.

Activity Assay:

3 µM m6A ssDNA oligos (DNA sequence: 5'-GTTGCCTGTTTCGTGTTGG/m6A/CTTGCCTGT-3') were incubated with FTO protein in reaction buffer including 50 mM HEPES pH 7.5, 100 µM 2OG, 100 µM Ascorbate, 50 µM (NH₄)₂Fe(SO₄)₂·6H₂O and 1 mM TCEP for 2 hours at room temperature. Dot-Blot was used for activity detection.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.

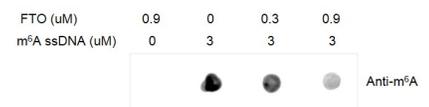


Recombinant FTO protein, SDS-PAGE gel.

Recombinant FTO protein was run on an 8% SDS-PAGE gel and stained with Coomassie Blue.

MW: 60.4 kDa

Purity: > 90%



Recombinant FTO protein activity.

3 µM m6A ssDNA oligos (sequence: 5'-GTTGCCTGTTTCGTGTTGG/m6A/CTTGCCTGT-3') were incubated with FTO protein in reaction buffer for 2 hr. at RT. Reaction products spotted onto nylon membrane were detected with m6A antibody (Cat. No. 31495). FTO alone was used as negative control.