Product datasheet

Anti-FTO antibody ab94482

5 References  2 Images

Overview

Product name Anti-FTO antibody
Description Rabbit polyclonal to FTO
Host species Rabbit
Tested applications Suitable for: WB
Species reactivity Reacts with: Mouse, Human
  Predicted to work with: Rat, Sheep, Rabbit, Cow, Dog, Pig, Orangutan
Immunogen Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control This antibody gave a positive signal in HepG2 whole cell lysate as well as the following tissue lysates: Human brain; Mouse hippocampus; Mouse brain.
General notes The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form Liquid
Storage instructions Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer pH: 7.40
Preservative: 0.02% Sodium azide
Constituent: PBS

Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

Purity Immunogen affinity purified
Clonality  
Polyclonal

Isotype  
IgG

Applications

The Abpromise guarantee  
Our Abpromise guarantee covers the use of ab94482 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>WB</td>
<td></td>
<td>Use a concentration of 1 µg/ml. Detects a band of approximately 58 kDa (predicted molecular weight: 58 kDa).</td>
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Target

Function  
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.

Tissue specificity  
Ubiquitously expressed, with relatively high expression in adrenal glands and brain; especially in hypothalamus and pituitary.

Involvement in disease  
Defects in FTO are the cause of growth retardation developmental delay coarse facies and early death (GRDDCFED) [MIM:612938]. The disease consists of a severe children multiple congenital anomaly syndrome with death by the age of 3 years. All affected individuals had 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 were also observed.

Sequence similarities  
Belongs to the fto family.

Domain  
The 3D-structure of the Fe2OG dioxygenase domain is similar to that of the Fe2OG dioxygenase domain found in the bacterial DNA repair dioxygenase alkB and its mammalian orthologs, but sequence similarity is very low. As a consequence, the domain is not detected by protein signature databases.

Cellular localization  
Nucleus.

Images
Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: FTO knockout HAP1 whole cell lysate (20 µg)
Lane 3: HEK293 whole cell lysate (20 µg)
Lane 4: MOLT4 whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab94482 observed at 58 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab94482 was shown to specifically recognize FTO in wild-type HAP1 cells along with additional cross-reactive bands. No band was observed when FTO knockout samples were examined. Wild-type and FTO knockout samples were subjected to SDS-PAGE. Ab94482 and ab8245 (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1 µg/ml and 1/10,000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) secondary antibodies at 1/10,000 dilution for 1 hour at room temperature before imaging.

All lanes: Anti-FTO antibody (ab94482) at 1 µg/ml

Lane 1: Human brain tissue lysate - total protein (ab29466)
Lane 2: Mouse Hippocampus Tissue Lysate
Lane 3: Brain (Mouse) Tissue Lysate
Lane 4: HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes: Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 58 kDa
Observed band size: 58 kDa
Additional bands at: 20 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 20 minutes

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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