


Anti-FTO antibody [5-2H10] ab92821

敲除 验证

★★★★☆ 3 Abreviews 42 References 4 图像

概述

产品名称	Anti-FTO抗体[5-2H10]
描述	小鼠单克隆抗体[5-2H10] to FTO
宿主	Mouse
经测试应用	适用于: WB, ICC/IF, Flow Cyt
种属反应性	与反应: Rat, Human 预测可用于: Sheep, Horse, Cow, Dog, Non human primates 
免疫原	Synthetic peptide corresponding to Human FTO (N terminal) conjugated to keyhole limpet haemocyanin. Database link: Q9C0B1
阳性对照	WB: Rat testes nuclear lysate. ICC/IF: Neuronal progenitor cells. Flow Cyt: SH-SY5Y cells.
常规说明	<p>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.</p> <p>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</p>

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
存储溶液	Constituents: 0.238% HEPES, 0.01% BSA, 50% Glycerol, 0.87% Sodium chloride
纯度	Protein G purified
纯化说明	Protein G purified culture supernatant.
克隆	单克隆
克隆编号	5-2H10
同种型	IgG2a

应用

The Abpromise guarantee Abpromise™ 承诺保证使用ab92821于以下的经测试应用

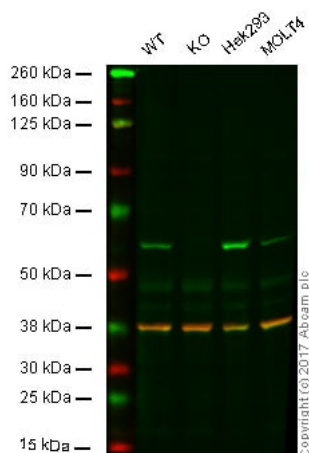
“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
WB		1/1000. Detects a band of approximately 58 kDa (predicted molecular weight: 58 kDa).
ICC/IF	★★★★★ (1)	1/100.
Flow Cyt		Use 1µg for 10 ⁶ cells. ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

靶标

功能	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.
组织特异性	Ubiquitously expressed, with relatively high expression in adrenal glands and brain; especially in hypothalamus and pituitary.
疾病相关	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.
序列相似性	Belongs to the fto family.
结构域	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.
细胞定位	Nucleus.

图片



Western blot - Anti-FTO antibody [5-2H10]
(ab92821)

Lane 1: Wild-type HAP1 whole cell lysate (20 µg)

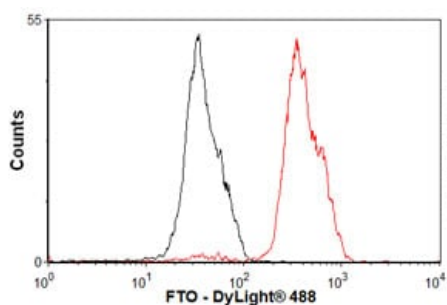
Lane 2: FTO knockout HAP1 whole cell lysate (20 µg)

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 - ab92821 observed at 58 kDa. Red - loading control, **ab181602**, observed at 37 kDa.

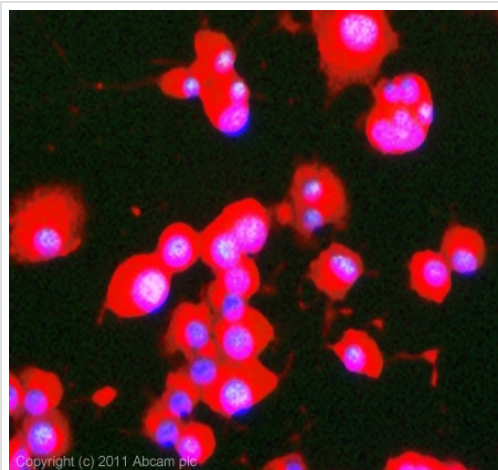
ab92821 was shown to specifically recognize FTO in wild-type HAP1 cells along with additional cross reactive bands. No band was observed when FTO knockout samples were examined. Wild-type and FTO knockout samples were subjected to SDS-PAGE. ab92821 and **ab181602** (Rabbit anti-GAPDH loading control) were incubated overnight at 4°C at a 1/1000 dilution and 1/10,000 dilution respectively. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed (**ab216772**) and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed (**ab216777**) secondary antibodies at 1/10,000 dilution for 1 hour at room temperature before imaging.



Flow Cytometry - Anti-FTO antibody [5-2H10]
(ab92821)

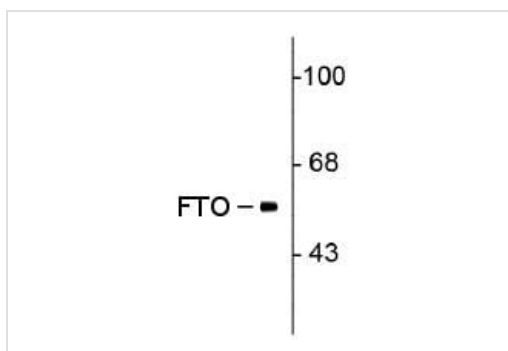
Overlay histogram showing SH-SY5Y cells stained with ab92821 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab92821, 1µg/1x10⁶ cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2a [ICIG2A] (**ab91361**, 1µg/1x10⁶ cells) used under the same conditions.

Acquisition of >5,000 events was performed. This antibody gave a positive signal in SH-SY5Y cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunocytochemistry/ Immunofluorescence - Anti-FTO antibody [5-2H10] (ab92821)

ICC/IF image of ab92821 stained PC12 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab92821, 5µg/ml) overnight at +4°C. The secondary antibody (green) was **ab96879**, DyLight® 488 goat anti-mouse IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Western blot - Anti-FTO antibody [5-2H10] (ab92821)

Anti-FTO antibody [5-2H10] (ab92821) at 1/1000 dilution + Rat testes lysate

Predicted band size: 58 kDa

Observed band size: 58 kDa

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