abcam

Product datasheet

Anti-EIF2S1 antibody [EIF2a] ab5369

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概述

产品名称	Anti-EIF2S1抗体[EIF2a]
描述	**小鼠单克隆抗体**[EIF2a] to EIF2S1
宿主	Mouse
经测试应用	**适用于:** ICC, WB, IHC-P
种属反应性	**与反应:** Mouse, Rat, Human, African green monkey
免疫原	Recombinant full length protein (Human).
表位	not mapped.
阳性对照	WB: MCF7, COS-7, PC-12, Jurkat, NIH/3T3, A431 and HeLa cells. IHC: Human colon and breast carcinoma tissue. Human placenta. ICC: HepG2 and A549 cells.
常规说明	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

性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
存储溶液	pH: 7.40 Preservative: 0.1% Sodium azide Constituent: PBS
纯度	Protein A purified
克隆	单克隆
克隆编号	EIF2a
同种型	IgG1

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab5369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
ICC		Use a concentration of 1 µg/ml.
WB	★★★★★ (4)	1/500 - 1/1000. Detects a band of approximately 36 kDa (predicted molecular weight: 36 kDa).
IHC-P		1/10 - 1/50. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

靶标

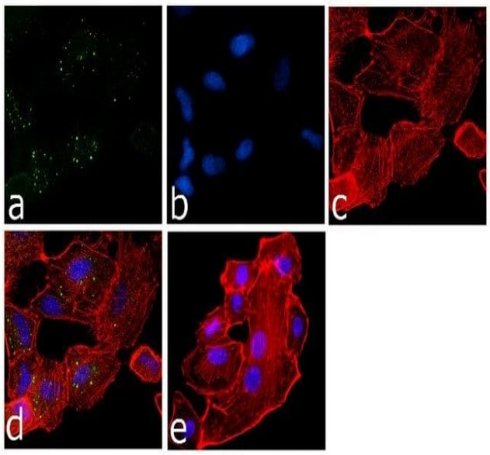
功能 Functions in the early steps of protein synthesis by forming a ternary complex with GTP and initiator tRNA. This complex binds to a 40S ribosomal subunit, followed by mRNA binding to form a 43S preinitiation complex. Junction of the 60S ribosomal subunit to form the 80S initiation complex is preceded by hydrolysis of the GTP bound to eIF-2 and release of an eIF-2-GDP binary complex. In order for eIF-2 to recycle and catalyze another round of initiation, the GDP bound to eIF-2 must exchange with GTP by way of a reaction catalyzed by eIF-2B.

序列相似性 Belongs to the eIF-2-alpha family.
Contains 1 S1 motif domain.

翻译后修饰 Substrate for at least 4 kinases: EIF2AK1/HRI, EIF2AK2/PKR, EIF2AK3/PERK and EIF2AK4/GCN2. Phosphorylation stabilizes the eIF-2/GDP/eIF-2B complex and prevents GDP/GTP exchange reaction, thus impairing the recycling of eIF-2 between successive rounds of initiation and leading to global inhibition of translation (PubMed:15207627, PubMed:18032499). Phosphorylated; phosphorylation on Ser-52 by the EIF2AK4/GCN2 protein kinase occurs in response to amino acid starvation and UV irradiation.

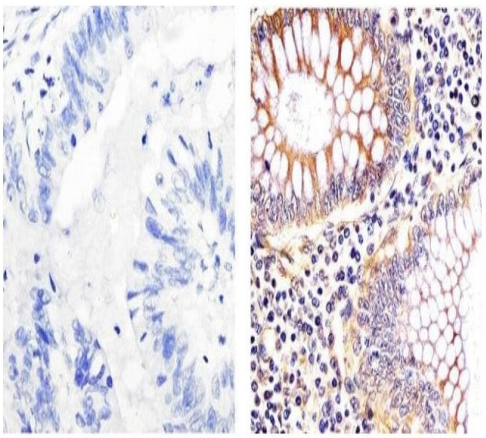
细胞定位 Cytoplasmic granule. The cytoplasmic granules are stress granules which are a dense aggregation in the cytosol composed of proteins and RNAs that appear when the cell is under stress. Colocalizes with NANOS3 in the stress granules (By similarity).

图片



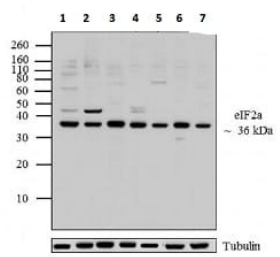
Immunocytochemistry - Anti-EIF2S1 antibody [EIF2a] (ab5369)

Immunofluorescence analysis of eIF2a was done on 70% confluent log phase A549 cells. The cells were fixed with 4% paraformaldehyde for 15 minutes, permeabilized with 0.25% Triton™ X-100 for 10 minutes, and blocked with 5% BSA for 1 hour at room temperature. The cells were labeled with ab5369 1:250 dilution in1% BSA and incubated for 3 hours at room temperature and then labeled with Goat anti-Mouse IgG (H+L) Superclonal Secondary Antibody, Alexa Fluor® 488 conjugate at a dilution of 1:2000 for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with SlowFade® Gold Antifade Mountant with DAPI. F-actin (Panel c: red) was stained with Rhodamine Phalloidin (1:300). Panel d is a merged image showing Cytoplasmic localization. Panel e is a no primary antibody control. The images were captured at 60X magnification.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EIF2S1 antibody [EIF2a] (ab5369)

Immunohistochemistry analysis of EIF 2ALPHA (EIF2A) showing staining in the cytoplasm of paraffin-embedded human colon carcinoma (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature, washed with ddH2O and PBS, and then probed with ab5369.



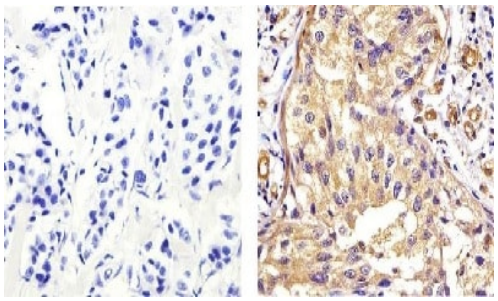
Western blot - Anti-EIF2S1 antibody [EIF2a] (ab5369)

All lanes : Anti-EIF2S1 antibody [EIF2a] (ab5369)

Lane 1 : COS-7 (african green monkey kidney fibroblast-like cell line) whole cell lysate at 20 µg
Lane 2 : MCF7 (human breast adenocarcinoma cell line) whole cell lysate at 20 µg
Lane 3 : PC-12 (rat adrenal gland pheochromocytoma cell line) whole cell lysate at 20 µg
Lane 4 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 5 : Jurkat (human T cell leukemia cell line from peripheral blood) whole cell lysate
Lane 6 : NIH/3T3 (mouse embryonic fibroblast cell line) whole cell lysate
Lane 7 : A431 (human epidermoid carcinoma cell line) whole cell lysate

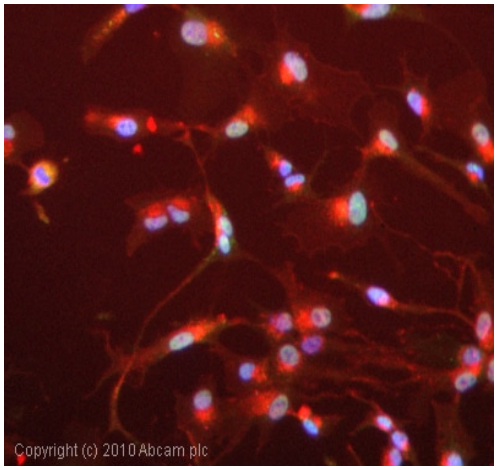
Secondary
Lanes 1-4 & 6-7 : Goat anti-Mouse IgG (H+L) Secondary Antibody, HRP conjugate at 1/4000 dilution
Lane 5 : Goat anti-Mouse IgG (H+L) Secondary Antibody, HRP conjugate

Predicted band size: 36 kDa



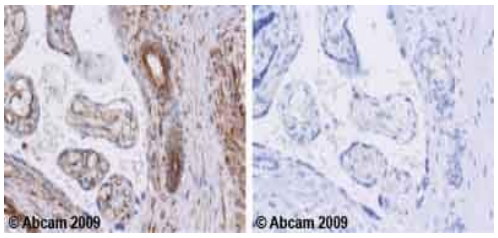
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EIF2S1 antibody [EIF2a] (ab5369)

Immunohistochemical analysis of human colon carcinoma (right) compared to a negative control (left) using ab5369 at the dilution 1/10.



Immunocytochemistry - Anti-EIF2S1 antibody [EIF2a] (ab5369)

ICC/IF image of ab5369 stained HepG2 cells. The cells were 4% formaldehyde fixed (10 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 (ab5369, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EIF2S1 antibody [EIF2a] (ab5369)

Ab5369 staining EIF2S1 in human placenta. Staining is localised to the cytoplasm.
Left panel: with primary antibody at 2 ug/ml. Right panel: isotype control.
Sections were stained using an automated system DAKO Autostainer Plus , at room temperature. Sections were rehydrated and antigen retrieved with the Dako 3-in-1 AR buffer citrate pH 6.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS), then incubated with primary antibody for 20 minutes, and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.

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