abcam

Product datasheet

Anti-eIF4G1 antibody ab2609

3 Abreviews 20 References 5 Images

Overview

Product name	Anti-eIF4G1 antibody
Description	Rabbit polyclonal to eIF4G1
Host species	Rabbit
Tested applications	**Suitable for:** IP, WB, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Rat, Human, African green monkey **Predicted to work with:** Mouse, Rabbit, Horse, Hamster, Cow, Cat, Dog, Chimpanzee, Rhesus monkey, Gorilla, Chinese hamster, Orangutan, Elephant
Immunogen	Synthetic peptide within Human eIF4G1 aa 550-650. The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please **contact** our Scientific Support team to discuss your requirements. NP_886553.2 (GeneID 1981). Database link: **Q04637**
Positive control	WB: HeLa and HEK-293T whole cell lysate. Rat liver lysate. IHC-P: Human colon tissue. IP: eIF4G1 in HeLa whole cell lysate. ICC/IF: MCF7 cells.
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. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7 Preservative: 0.1% Sodium azide
Purification notes	Affinity purified using the immunising peptide immobilized on solid support.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab2609 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IP	★☆☆☆☆ (1)	1/1000.
WB	★★★★★ (2)	1/1000 - 1/10000. Detects a band of approximately 200 kDa (predicted molecular weight: 220 kDa). EIF4G is more susceptible to degradation compared to other proteins, especially from some tissue sources such as liver. This is true even when tissue is stored at frozen. SDS-PAGE sample buffer may improve the stability, but samples that are stored frozen may show degradation bands that have been described in the
IHC-P		Use a concentration of 4 µg/ml.
ICC/IF		1/500.

Target

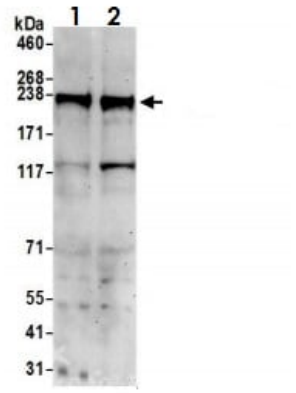
Function
Component of the protein complex eIF4F, which is involved in the recognition of the mRNA cap, ATP-dependent unwinding of 5'-terminal secondary structure and recruitment of mRNA to the ribosome.

Involvement in disease
Defects in EIF4G1 are the cause of Parkinson disease type 18 (PARK18) [MIM:614251]. An autosomal dominant, late-onset form of Parkinson disease. Parkinson disease is a complex neurodegenerative disorder characterized by bradykinesia, resting tremor, muscular rigidity and postural instability, as well as by a clinically significant response to treatment with levodopa. The pathology involves the loss of dopaminergic neurons in the substantia nigra and the presence of Lewy bodies (intraneuronal accumulations of aggregated proteins), in surviving neurons in various areas of the brain.

Sequence similarities
Belongs to the eIF4G family.
Contains 1 MI domain.
Contains 1 MIF4G domain.
Contains 1 W2 domain.

Post-translational modifications
Phosphorylated at multiple sites in vivo. Phosphorylation at Ser-1185 by PRKCA induces binding to MKNK1.
Following infection by certain enteroviruses, rhinoviruses and aphthoviruses, EIF4G1 is cleaved by the viral protease 2A, or the leader protease in the case of aphthoviruses. This shuts down the capped cellular mRNA transcription.

Images



Western blot - Anti-eIF4G1 antibody (ab2609)

All lanes : Anti-eIF4G1 antibody (ab2609) at 0.1 µg/ml

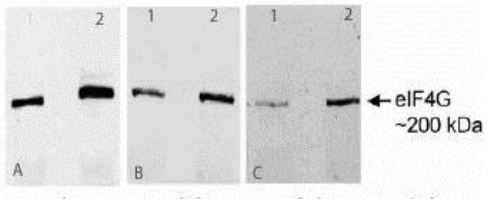
Lane 1 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 2 : HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate

Lysates/proteins at 50 µg per lane.

Predicted band size: 220 kDa

Exposure time: 3 minutes

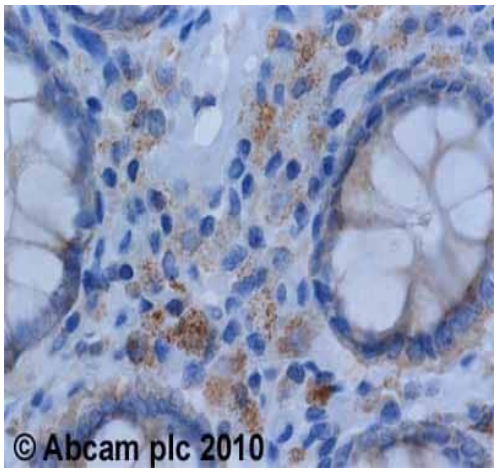
Lysates prepared using NETN lysis buffer.



Western blot - Anti-eIF4G1 antibody (ab2609)

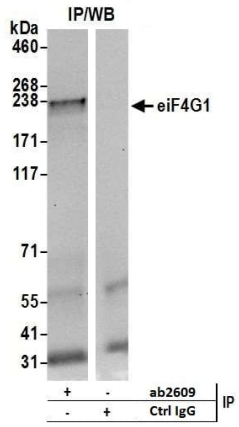
50µg (lane 1) and 150µg (lane 2) rat liver lysate, separated on 7.5% acrylamide SDS-PAGE gel. Detected using ab2609 at 1:1000 (A), 1:5000 (B) and 1:10000 (C) dilution by ECL.

50µg (lane 1) and 150µg (lane 2) rat liver lysate, separated on 7.5% acrylamide SDS-PAGE gel. Detected using ab2609 at 1:1000 (A), 1:5000 (B) and 1:10000 (C) dilution by ECL.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-eIF4G1 antibody (ab2609)

ab2609 (4µg/ml) staining eIF4G1 in human colon using an automated system (DAKO Autostainer Plus). Using this protocol there is strong staining of the cytoplasm of the intestinal cells. Sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffer EDTA pH 9.0 in a DAKO PT link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 mins. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 min 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, optimization of primary antibody concentration and incubation time is recommended. Signal amplification may be required.



Immunoprecipitation - Anti-eIF4G1 antibody (ab2609)

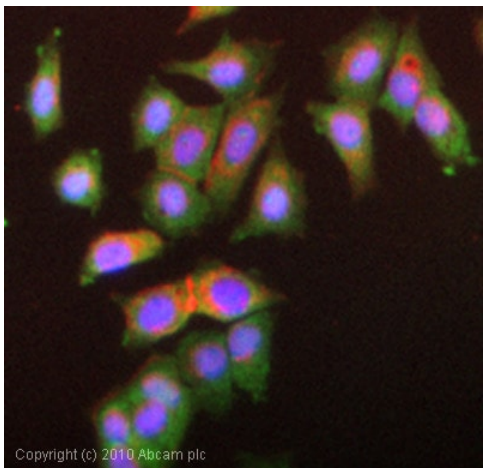
Lane 1: immunoprecipitated by ab2609 at 6 µg per reaction;

Lane 2: Immunoprecipitated by control IgG at 6 µg per reaction.

All lanes : Anti-eIF4G1 antibody (ab2609) at 1 µg/ml

Lane 1 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 2 : HeLa whole cell lysate

Exposure time: 10 seconds



Immunocytochemistry/ Immunofluorescence - Anti-eIF4G1 antibody (ab2609)

ICC/IF image of ab2609 stained MCF7 cells. The cells were 4% PFA 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 (ab2609, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit 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.

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