abcam

ab124994

Anti-Elongation factor 1-gamma antibody [EPR7200]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR7200
Purification technique	Affinity purification Protein A
Dissociation constant	1.31 x 10^{-11} M
Concentration	0.133 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/250 - 1/500

Notes	Heat up to 98 degrees C, below boiling, and then let cool for 10-20 min. Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Species	Mouse
Dilution info	1/10000 - 1/50000
Notes	-

Species	Rat
Dilution info	1/10000 - 1/50000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Expected

Species	Mouse, Rat

Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information EEF1G

Function	Probably plays a role in anchoring the complex to other cellular components.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For

details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Elongation factor 1-gamma sometimes called EF-1γ is a protein that plays an important role in the process of protein biosynthesis. It is part of the elongation factor complex essential for the elongation phase of translation. This protein has a molecular weight of about 50 kDa. EF-1γ is expressed ubiquitously meaning it is found in many different types of tissues throughout the body indicating its broad necessity for cellular function.
Biological function summary	Elongation factor 1-gamma supports the stability and functionality of the larger elongation factor 1 complex which also includes EF-1 alpha EF-1 beta and EF-1 delta. This complex facilitates the economic and rapid engagement of aminoacyl-tRNA to the ribosome's A-site which is important in the synthesis of proteins ensuring that proteins are accurately and efficiently elongated during translation.
Pathways	Elongation factor 1-gamma has significance in the translation pathway and is also linked to the mTOR signaling pathway. The translation pathway is fundamental for general protein synthesis while the mTOR pathway is pivotal in regulating cell growth and proliferation. In these contexts elongation factor 1-gamma associates with other proteins such as elongation factor 1 alpha to optimize the elongation step of protein synthesis impacting cell growth and survival.
Associated diseases and disorders	Elongation factor 1-gamma shows connections to certain cancer types and neurodegenerative diseases. In cancer alterations or dysregulations of EF-1γ expression can influence tumor growth and development. Meanwhile relation to neurodegenerative disorders is under study as EF-1γ participates in protein synthesis with possible impacts on neuronal survival. Elongation factor 1-gamma's interactions with proteins like EF-1 alpha in these conditions spotlight its importance to cellular homeostasis and pathology.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

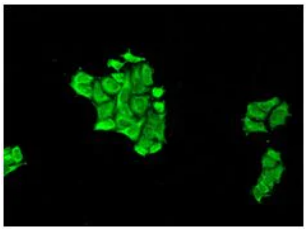
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

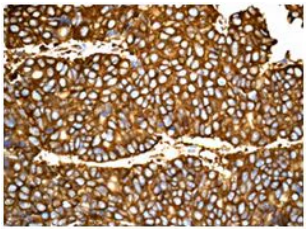
6 product images



Immunocytochemistry/ Immunofluorescence - Anti-Elongation factor 1-gamma antibody [EPR7200] (ab124994)

Elongation factor 1-gamma Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Elongation factor 1-gamma antibody

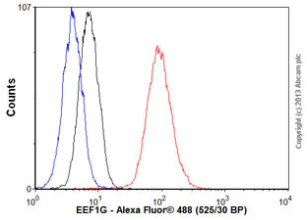
ab124994 at 1/100 dilution staining Elongation factor 1-gamma in HeLa cells by Immunofluorescence.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Elongation factor 1-gamma antibody [EPR7200] (ab124994)

Elongation factor 1-gamma Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Elongation factor 1-gamma antibody

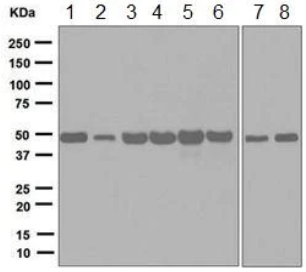
ab124994 at 1/250 dilution staining Elongation factor 1-gamma in paraffin-embedded Human pancreatic adenocarcinoma tissue by Immunohistochemistry.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Elongation factor 1-gamma antibody [EPR7200] (ab124994)

Elongation factor 1-gamma Flow Cytometry (Intracellular) staining using rabbit Anti-Elongation factor 1-gamma antibody

Overlay histogram showing HeLa cells stained with ab124994 (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 (ab124994 1/10000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Western blot - Anti-Elongation factor 1-gamma antibody [EPR7200] (ab124994)

All lanes:
Western blot - Anti-Elongation factor 1-gamma antibody [EPR7200] (ab124994) at 1/10000 dilution

Lane 1:
293T cell lysate at 10 µg

Lane 2:
HL-60 cell lysate at 10 µg

Lane 3:
C6 cell lysate at 10 µg

Lane 4:
RAW 264.7 cell lysate at 10 µg

Lane 5:
PC-12 cell lysate at 10 µg

Lane 6:
NIH/3T3 cell lysate at 10 µg

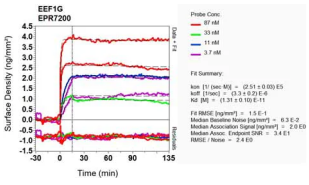
Lane 7:
HepG2 cell lysate at 10 µg

Lane 8:
HeLa cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP-conjugated at 1/2000 dilution

Predicted band size: 50 kDa



OI-RD Scanning - Anti-Elongation factor 1-gamma antibody [EPR7200] (ab124994)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

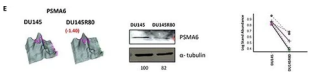


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Western blot - Anti-Elongation factor 1-gamma antibody [EPR7200] (ab124994)

Elongation factor 1-gamma western blot using anti-Elongation factor 1-gamma antibody [EPR7200] ab124994. Publication image and figure legend from Milone, M. R., Pucci, B., et al., 2015, Oncotarget, PubMed 25481874.

ab124994 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab124994 please see the product overview.

Validation by 1-D Western blot of protein identified as differentially expressed in the 2-DE DIGE/MS analysisIn the middle of each validation images 1D Western blot experiment was showed. Protein lysate from DU145R80 and DU145 were immunostained with anti-LAMIN A/C (A); anti-LAMIN B2 (B); anti-AXNA1 (C); anti-FLNA (D), anti-PSMA6 (E) and anti-eEF1γ antibodies (F). CDK4 or α-tubulin immunoblot ensured equal loading of sample in each lane. The quantization of the bands was obtained using the software ImageQuantTL. Below each image the value relative to each band normalized on loading control is reported. On the left of each images the 2-DE DIGE quantification for spots of interest is reported in a 3D view that shows significant difference in protein expression. On the right the corresponding between log of standard abundance of the spot of interest (y-axis) for the two different cell lines (x-axis) on the four replicates are shown.

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