abcam

ab227981

Anti-LYRIC/AEG1 antibody [EPR20797]

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	EPR20797
Purification technique	Affinity purification Protein A
Concentration	0.553 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

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

WB

Tested

Species	Rat
Dilution info	1/1000
Notes	-

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information MTDH

Function	Down-regulates SLC1A2/EAAT2 promoter activity when expressed ectopically. Activates the nuclear factor kappa-B (NF-kappa-B) transcription factor. Promotes anchorage-independent growth of immortalized melanocytes and astrocytes which is a key component in tumor cell expansion. Promotes lung metastasis and also has an effect on bone and brain metastasis, possibly by enhancing the seeding of tumor cells to the target organ endothelium. Induces chemoresistance.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

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	LYRIC/AEG1 also known as Astrocyte Elevated Gene-1 (AEG-1) is a protein with a molecular weight of approximately 60 kDa. This protein is expressed in several tissues with notable expression in the brain liver and other organs. LYRIC/AEG1 is encoded by the MTDH gene and plays a mechanical role in regulating processes such as gene expression and cell survival. It localizes to the endoplasmic reticulum the perinuclear region and also the cell nucleus indicating a multifaceted role in cellular dynamics.
Biological function summary	LYRIC/AEG1 functions significantly in oncogenesis and tumor progression. It participates actively in gene regulation and interacts with various proteins as part of complex protein networks influencing cell survival migration and adherence.

	This protein is known to enhance metastasis and promote angiogenesis in malignant contexts. Researchers often study the modulation of LYRIC/AEG1 to assess its impact on cell proliferation and differentiation in cancer cells.
Pathways	LYRIC/AEG1 is associated with important signaling pathways such as the NF-κB and PI3K/Akt pathways. These pathways are critical for cell survival and proliferation and LYRIC/AEG1 modulates their activity. Through these pathways it interacts with other proteins like IκB kinase complexes and Akt coordinating cellular responses to external stimuli. LYRIC/AEG1's influence on these pathways highlights its role in cellular adaptation to stress and potential therapeutic interventions.
Associated diseases and disorders	LYRIC/AEG1's role becomes apparent in its association with cancers specifically hepatocellular carcinoma and breast cancer. In these cancers LYRIC/AEG1 overexpression correlates with poor prognosis and enhanced tumor progression. Its interaction with proteins such as c-Myc and E-cadherin highlights its involvement in cancer cell metabolism and epithelial-mesenchymal transition (EMT). Understanding LYRIC/AEG1's function in disease contexts aids in developing targeted treatment strategies for these malignancies.

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

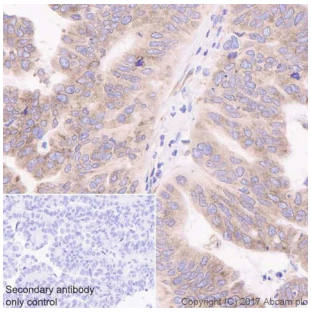
We do not recommend this combination. It is not covered by our product promise.

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.

9 product images

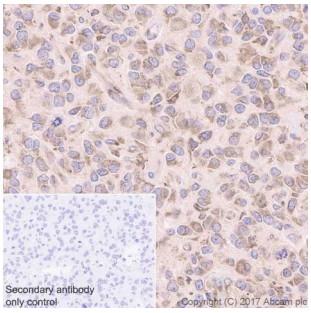


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LYRIC/AEG1 antibody [EPR20797] (ab227981)

LYRIC/AEG1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-LYRIC/AEG1 antibody

Immunohistochemical analysis of paraffin-embedded human ovarian cancer tissue labeling LYRIC/AEG1 with ab227981 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic staining in human ovarian cancer tissue (PMID: 27143933) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

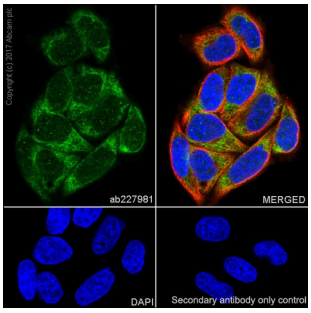
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LYRIC/AEG1 antibody [EPR20797] (ab227981)

Immunohistochemical analysis of paraffin-embedded human astrocytoma tissue labeling LYRIC/AEG1 with ab227981 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic staining in human astrocytoma tissue (PMID: 25197376) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

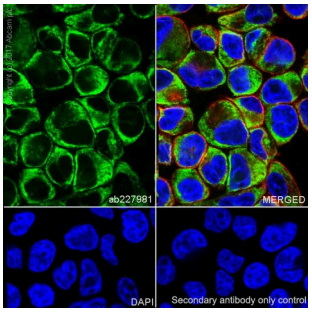


Immunocytochemistry/ Immunofluorescence - Anti-LYRIC/AEG1 antibody [EPR20797] (ab227981)

LYRIC/AEG1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-LYRIC/AEG1 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling LYRIC/AEG1 with ab227981 at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic and weakly nuclear staining in HeLa cell line (PMID: 21750868).
The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

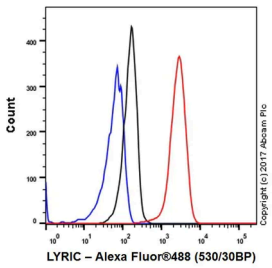


Immunocytochemistry/ Immunofluorescence - Anti-LYRIC/AEG1 antibody [EPR20797] (ab227981)

LYRIC/AEG1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-LYRIC/AEG1 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized PC-3 (human prostate adenocarcinoma cell line) cells labeling LYRIC/AEG1 with ab227981 at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining in PC-3 cell line.
The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

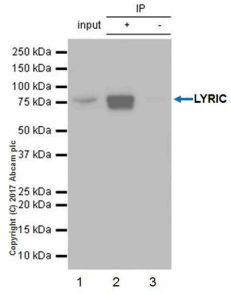
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-LYRIC/AEG1 antibody [EPR20797] (ab227981)

LYRIC/AEG1 Flow Cytometry (Intracellular) staining using rabbit Anti-LYRIC/AEG1 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cell line labeling LYRIC/AEG1 with ab227981 at 1/500 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-LYRIC/AEG1 antibody [EPR20797] (ab227981)

LYRIC/AEG1 was immunoprecipitated from 0.35 mg of HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab227981 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab227981 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.
Lane 1: HeLa whole cell lysate 10 µg (Input).

Lane 2: ab227981 IP in HeLa whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab227981 in HeLa whole cell lysate.

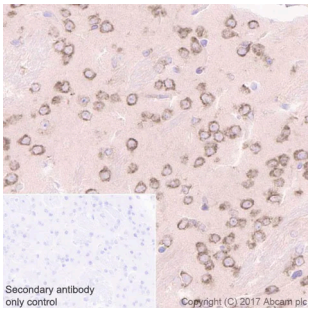
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 1 second.

The protein migrates as a 75/80kDa doublet, as has been observed in the literature (PMID: 23835593).

All lanes:
Immunoprecipitation - Anti-LYRIC/AEG1 antibody [EPR20797] (ab227981)

Predicted band size: 64 kDa

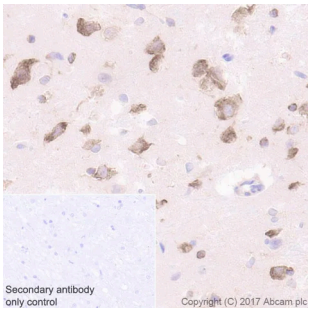


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LYRIC/AEG1 antibody [EPR20797] (ab227981)

LYRIC/AEG1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-LYRIC/AEG1 antibody

Immunohistochemical analysis of paraffin-embedded rat cerebrum tissue labeling LYRIC/AEG1 with ab227981 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic staining in rat cerebrum tissue (PMID:25197376) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

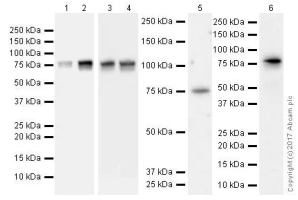


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LYRIC/AEG1 antibody [EPR20797] (ab227981)

LYRIC/AEG1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-LYRIC/AEG1 antibody

Immunohistochemical analysis of paraffin-embedded mouse cerebrum tissue labeling LYRIC/AEG1 with ab227981 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic staining in mouse cerebrum tissue (PMID:25197376) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-LYRIC/AEG1 antibody [EPR20797] (ab227981)

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure times.

Lanes 1, 2 & 5: 3 minutes.

Lanes 3 & 4: 15 seconds.

Lane 6: 58 seconds.

The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument.

This antibody detected LYRIC/AEG1 in rat PC-12 cells only, not in other rat tissues or cell lines tested.

The protein migrates as a 75/80kDa doublet, as has been observed in the literature (PMID: 23835593).

All lanes:
Western blot - Anti-LYRIC/AEG1 antibody [EPR20797] (ab227981) at 1/1000 dilution

Lane 1:
MCF7 (human breast adenocarcinoma cell line) whole cell lysate at 20 µg

Lane 2:
T-47D (human ductal breast epithelial tumor cell line) whole cell lysate at 20 µg

Lane 3:
HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 4:
PC-3 (human prostate adenocarcinoma cell line) whole cell lysate at 20 µg

Lane 5:
Human lung cancer lysate at 10 µg

Lane 6:
PC-12 (rat adrenal gland pheochromocytoma cell line) whole cell lysate at 10 µg

Secondary

Lanes 1, 2, 3, 4 and 6:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Lane 5:
Western blot - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/4000 dilution

Predicted band size: 64 kDa

Observed band size: 75 kDa, 80 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.