abcam

ab240646

Anti-GMEB1 antibody [EPR23056-62]

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	EPR23056-62
Purification technique	Affinity purification Protein A
Concentration	0.576 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	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Species	Human
Dilution info	1/50
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.

Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/1000 - 1/2000
Notes	Use at 1/1000 dilution for human and mouse, 1/2000 dilution for rat.

Species	Rat
Dilution info	1/1000 - 1/2000
Notes	Use at 1/1000 dilution for human and mouse, 1/2000 dilution for rat.

Species	Human
Dilution info	1/1000 - 1/2000
Notes	Use at 1/1000 dilution for human and mouse, 1/2000 dilution for rat.

Target data

See full target information GMEB1

Function	Acts as a DNA-binding transcriptional regulator involved in modulating the expression of genes responsive to glucocorticoid signaling (PubMed:12702733).

Specifically binds AT-rich DNA motifs known as glucocorticoid modulatory elements (GMEs), repressing or enhancing transcription depending on cellular context (PubMed:10894151). Forms heterodimeric complexes with GMEB2, which enhances its DNA-binding specificity and transcriptional activity. This complex plays a critical role in the repression of glucocorticoid receptor (GR/NR3C1) transcriptional activity, acting as a negative modulator of glucocorticoid signaling (PubMed:10894151). Regulates dopamine-enriched midbrain genes, including tyrosine hydroxylase/TH and the dopamine transporter SLC6A3, essential for dopamine signaling (By similarity). Also binds the transferrin receptor promoter. In the cytoplasm, inhibits caspase activation and neuronal apoptosis by stabilizing CFLARL and blocking pro-caspase 8 activation (PubMed:31046799, PubMed:32514408).

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	The GMEB1 protein also known as Glucocorticoid Modulatory Element Binding Protein 1 serves as a transcriptional coactivator involved in regulating gene expression. It weighs approximately 57 kDa and is found mainly in the nucleus due to its role in transcriptional processes. GMEB1 is expressed in various tissues with noticeable levels in neural tissues and other organ systems. The protein influences cellular processes by interacting with DNA and other transcription factors therefore modulating the transcriptional machinery.
Biological function summary	GMEB1 plays a significant role in gene expression by forming complexes with other transcription factors and binding specific DNA elements. GMEB1 interacts with both nuclear and cytoplasmic proteins affecting cellular functions such as proliferation differentiation and apoptosis. It is known to modulate the activity of certain steroid hormone receptors impacting physiological responses to hormonal signals. Through these interactions GMEB1 assists in mediating the response to cellular stress and contributes to overall cellular homeostasis.
Pathways	GMEB1 contributes to regulating the glucocorticoid receptor signaling pathway and the apoptotic pathways. It interacts with proteins like the glucocorticoid receptor influencing how cells respond to glucocorticoid hormones. Additionally GMEB1 participates in signaling that determines cell survival and programmed cell death making it significant in maintaining cell integrity. The protein ensures proper cellular response to stimuli integrating signals from multiple pathways and modulating cellular outcomes accordingly.
Associated diseases and disorders	GMEB1 has implications in cancer and neurological disorders. Aberrant expression or dysfunction of GMEB1 can contribute to tumorigenesis as its role in cell cycle regulation and apoptosis becomes compromised. GMEB1’s interaction with steroid hormone receptors links to breast cancer influencing disease progression and treatment response. Moreover GMEB1 has importance in neurological conditions through its expression in neural tissues and potential involvement in neuronal signaling and survival potentially impacting disorders like Alzheimer's disease.

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

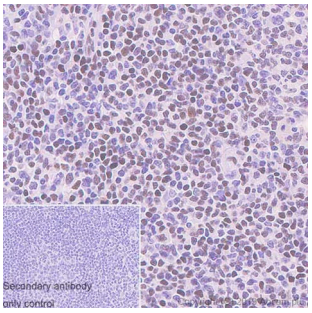
We do not recommend this combination. It is not covered by our product promise.

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.

12 product images

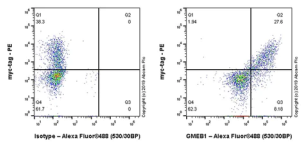


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GMEB1 antibody [EPR23056-62] (ab240646)

GMEB1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GMEB1 antibody

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling GMEB1 with ab240646 at 1/1000 dilution (0.576 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer). Nuclear staining on human tonsil (PMID: 16497673) is observed. The section was incubated with ab240646 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer).

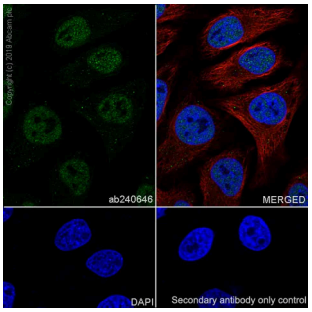
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-GMEB1 antibody [EPR23056-62] (ab240646)

GMEB1 Flow Cytometry (Intracellular) staining using rabbit Anti-GMEB1 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized HEK-293T (human embryonic kidney) transfected with mouse GMEB1 (WT) (aa1-562) expression vector containing a myc-His-tag® cells labelling GMEB1 with ab240646 at 1/500 dilution (Right) compared with a Rabbit monoclonal IgG (ab172730) (Left). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.
Cells were stained with rabbit IgG (Left) or ab240646 (Right). Then stained with anti-myc tag conjugated to PE.

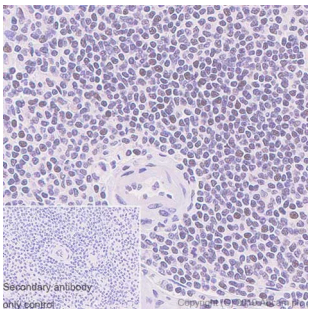


Immunocytochemistry/ Immunofluorescence - Anti-GMEB1 antibody [EPR23056-62] (ab240646)

GMEB1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GMEB1 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cells labelling GMEB1 with ab240646 at 1/50 dilution, followed by ab150077 AlexaFluor® 488 Goat anti-Rabbit secondary antibody at 1/1000 dilution (Green). Confocal image showing mainly nuclear and weakly cytoplasmic staining in HeLa

cell line. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution.

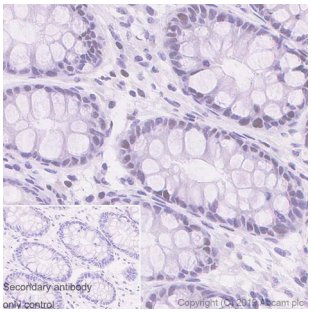


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GMEB1 antibody [EPR23056-62] (ab240646)

GMEB1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GMEB1 antibody

Immunohistochemical analysis of paraffin-embedded Human spleen tissue labeling GMEB1 with ab240646 at 1/1000 dilution (0.576 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer). Nuclear staining on human spleen (PMID: 16497673) is observed. The section was incubated with ab240646 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

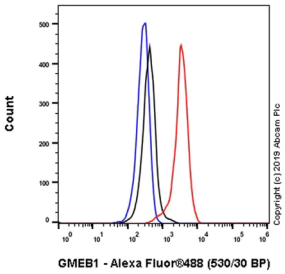


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GMEB1 antibody [EPR23056-62] (ab240646)

GMEB1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GMEB1 antibody

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling GMEB1 with ab240646 at 1/1000 dilution (0.576 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer). Nuclear staining on human colon (PMID: 16497673) is observed. The section was incubated with ab240646 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer).

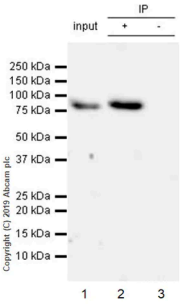
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-GMEB1 antibody [EPR23056-62] (ab240646)

GMEB1 Flow Cytometry (Intracellular) staining using rabbit Anti-GMEB1 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cells labelling GMEB1 with ab240646 at 1/500 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730, Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-GMEB1 antibody [EPR23056-62] (ab240646)

GMEB1 was immunoprecipitated from 0.35 mg HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate with ab240646 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab240646 at 1/500 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/1000 dilution.
Lane 1: HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate 10ug

Lane 2: ab240646 IP in HeLa whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab240646 in HeLa whole cell lysate

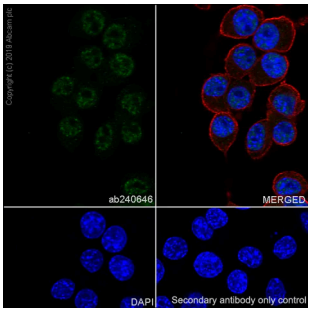
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 3 min.

All lanes:
Immunoprecipitation - Anti-GMEB1 antibody [EPR23056-62] (ab240646)

Predicted band size: 63 kDa

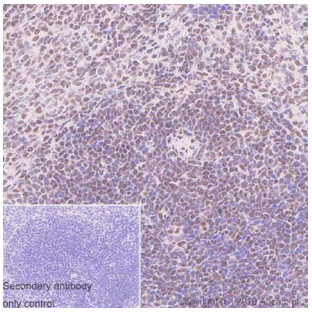
Observed band size: 82 kDa



Immunocytochemistry/ Immunofluorescence - Anti-GMEB1 antibody [EPR23056-62] (ab240646)

GMEB1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GMEB1 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Neuro-2a (mouse neuroblastoma neuroblast) cells labelling GMEB1 with ab240646 at 1/50 dilution, followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary antibody at 1/1000 dilution (Green). Confocal image showing mainly nuclear and weakly cytoplasmic staining in Neuro-2a cell line. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution.

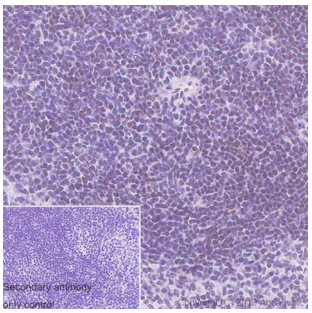


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GMEB1 antibody [EPR23056-62] (ab240646)

GMEB1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GMEB1 antibody

Immunohistochemical analysis of paraffin-embedded Rat spleen tissue labeling GMEB1 with ab240646 at 1/2000 dilution (0.288 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer). Nuclear staining on rat spleen. The section was incubated with ab240646 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

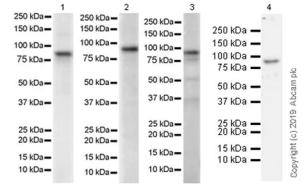


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GMEB1 antibody [EPR23056-62] (ab240646)

GMEB1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GMEB1 antibody

Immunohistochemical analysis of paraffin-embedded Mouse spleen tissue labeling GMEB1 with ab240646 at 1/1000 dilution (0.576 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer). Nuclear staining on mouse spleen (PMID: 10692587) is observed. The section was incubated with ab240646 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



Western blot - Anti-GMEB1 antibody [EPR23056-62] (ab240646)

Blocking and dilution buffer: 5% NFDM/TBST.
Exposure times.

Lane 1: 26 seconds; Lane 2: 125 seconds; Lane 3: 169 seconds; Lane 4: 3 minutes.

The weak lower bands below 75kDa could be degraded GMEB1 fragments (PMID:10386584).

All lanes:
Western blot - Anti-GMEB1 antibody [EPR23056-62] (ab240646) at 1/1000 dilution

Lane 1:
HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate at 10 µg

Lane 2:
A549 (human lung carcinoma epithelial cell), whole cell lysate at 10 µg

Lane 3:
RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage), whole cell lysate at 10 µg

Lane 4:
PC-12 (rat adrenal gland pheochromocytoma), whole cell lysate at 10 µg

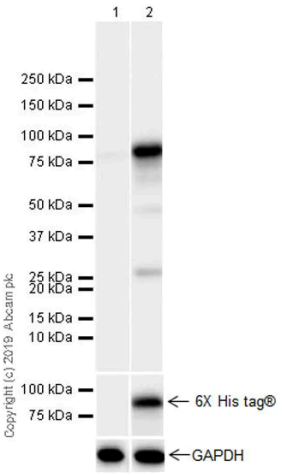
Secondary

Lanes 1 - 3:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Lane 4:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 63 kDa

Observed band size: 82 kDa



Western blot - Anti-GMEB1 antibody [EPR23056-62] (ab240646)

Blocking and dilution buffer: 5% NFDM/TBST.
Exposure time: 3 seconds.

The weak lower bands below 75kDa could be degraded GMEB1 fragments (PMID:10386584).

All lanes:
Western blot - Anti-GMEB1 antibody [EPR23056-62] (ab240646) at 1/1000 dilution

Lane 1:
HEK-293T (human embryonic kidney) transfected with an empty vector (vector control), containing a myc-His-tag®, whole cell lysate at 10 µg

Lane 2:
HEK-293T transfected with mouse GMEB1 (WT)(aa1-562) expression vector containing a myc-His-tag®, whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 63 kDa

Observed band size: 82 kDa

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