abcam

ab11420

Anti-ERp29 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.02% Sodium azide
Form	Liquid
Clonality	Polyclonal
Immunogen	Recombinant Full Length Protein corresponding to Rat Erp29. Database link P52555
Purity	Whole antiserum

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	1/500
Notes	Immunofluorescence data demonstrates that ERp29 is localized to the ER of rat thyrocytes using ab11420.

Species	Rat
Dilution info	1/500
Notes	Immunofluorescence data demonstrates that ERp29 is localized to the ER of rat thyrocytes using ab11420.

Species	Human
Dilution info	1/500
Notes	Immunofluorescence data demonstrates that ERp29 is localized to the ER of rat thyrocytes using ab11420.

Expected

Species	Guinea pig
Dilution info	-
Notes	Immunofluorescence data demonstrates that ERp29 is localized to the ER of rat thyrocytes using ab11420.

Species	Hamster
Dilution info	-
Notes	Immunofluorescence data demonstrates that ERp29 is localized to the ER of rat thyrocytes using ab11420.

Species	Primates
Dilution info	-
Notes	Immunofluorescence data demonstrates that ERp29 is localized to the ER of rat thyrocytes using ab11420.

Species	Dog
Dilution info	-
Notes	Immunofluorescence data demonstrates that ERp29 is localized to the ER of rat thyrocytes using ab11420.

Species	Cow
Dilution info	-
Notes	Immunofluorescence data demonstrates that ERp29 is localized to the ER of rat thyrocytes using ab11420.

IP

Expected

Species	Mouse, Rat, Guinea pig, Hamster, Primates, Human, Dog, Cow
Dilution info	Use at an assay dependent concentration.

Notes	-

Flow Cyt

Expected

Species	Mouse
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Rat
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Guinea pig
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Hamster
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Primates
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Human
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Dog
Dilution info	-

Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Cow
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Mouse
Dilution info	1/2500
Notes	This antibody detects an 29 kDa protein representing ERp29 in rat liver homogenate.

Species	Human
Dilution info	1/2500
Notes	This antibody detects an 29 kDa protein representing ERp29 in rat liver homogenate.

Species	Dog
Dilution info	1/2500
Notes	This antibody detects an 29 kDa protein representing ERp29 in rat liver homogenate.

Expected

Species	Rat
Dilution info	-
Notes	-

Species	Primates
Dilution info	1/2500
Notes	This antibody detects an 29 kDa protein representing ERp29 in rat liver homogenate.

Predicted

Species	Hamster, Cow, Guinea pig
Dilution info	-
Notes	-

IHC-Fr

Expected

Species	Mouse, Rat, Guinea pig, Hamster, Primates, Human, Dog, Cow
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information Erp29

Function	Does not seem to be a disulfide isomerase. Plays an important role in the processing of secretory proteins within the endoplasmic reticulum (ER), possibly by participating in the folding of proteins in the ER.

Storage

Shipped at conditions	Blue Ice
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

Supplementary info

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

Activity summary	ERp29 also known as Endoplasmic Reticulum Resident Protein 29 is a protein with a molecular weight of about 29 kDa. It acts mechanically by aiding protein folding and assembly in the endoplasmic reticulum (ER). This protein is expressed in many tissues but more in the brain liver and pancreas. ERp29 contributes to cellular homeostasis by facilitating the proper folding of newly synthesized proteins within the ER.
Biological function summary	This protein assists in maintaining ER function by preventing the accumulation of misfolded proteins. ERp29 is part of the protein disulfide isomerase family which helps in forming disulfide bonds in proteins ensuring their correct structure and function. It does not form part of a larger complex but interacts with other proteins to manage stress and maintain cellular function. These interactions help in the secretory pathway important for processing proteins.
Pathways	ERp29 plays an innovative role in the Unfolded Protein Response (UPR) a cellular reaction to ER stress. It works alongside proteins like GRP78 within the UPR to mitigate stress's harmful effects by enhancing the protein folding capacity of the ER. Additionally ERp29's involvement in the protein disulfide isomerase family connects it to the oxidative protein folding pathway which is essential for maintaining redox balance in the ER.
Associated diseases and disorders	ERp29's misregulation connects to neurodegenerative disorders such as Alzheimer's disease. It relates through its protein folding and stress response roles impacting cellular survival and function. Proteins like amyloid precursor protein (APP) show interaction with ERp29 in this context. Moreover in cancer biology ERp29 expression levels correlate with the progression of certain types of tumors as it influences pathways related to cell survival and apoptosis.

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

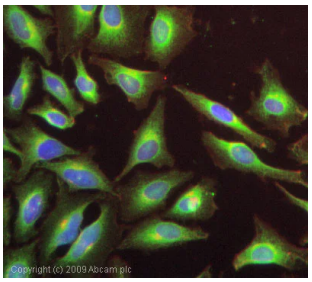
We do not recommend this combination. It is not covered by our product promise.

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.

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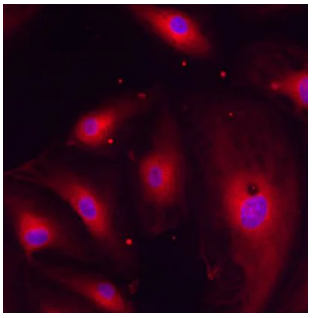
6 product images



Immunocytochemistry/ Immunofluorescence - Anti-ERp29 antibody (ab11420)

ERp29 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ERp29 antibody

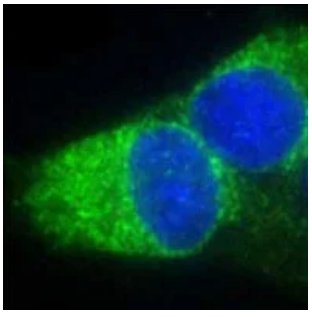
ICC/IF image of ab11420 stained HepG2 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab11420, 1/1000 dilution) 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.



Immunocytochemistry/ Immunofluorescence - Anti-ERp29 antibody (ab11420)

ERp29 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ERp29 antibody

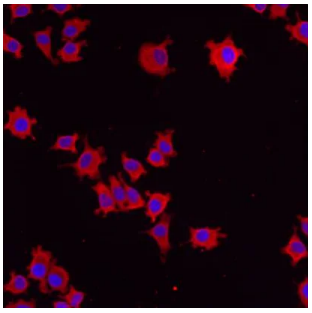
Immunocytochemistry/Immunofluorescence analysis of HMVEC cells labeling ERp29 with ab11420.



Immunocytochemistry/ Immunofluorescence - Anti-ERp29 antibody (ab11420)

ERp29 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ERp29 antibody

Immunocytochemistry/Immunofluorescence analysis of rat thyrocytes labeling ERp29 with ab11420.

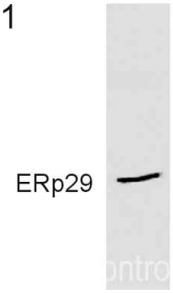


Immunocytochemistry/ Immunofluorescence - Anti-ERp29 antibody (ab11420)

ERp29 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ERp29 antibody

Immunocytochemistry/Immunofluorescence analysis of NS-1 cells labeling ERp29 with ab11420.

Fig. 1

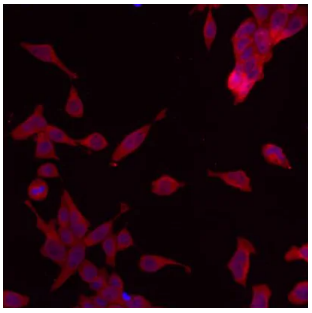


Western blot - Anti-ERp29 antibody (ab11420)

ERp29 Western blot staining using rabbit Anti-ERp29 antibody

Western blot of ERp29 in HEK cell lysate using ab11420.
All lanes:
Western blot - Anti-ERp29 antibody (ab11420)

Predicted band size: 29 kDa



Immunocytochemistry/ Immunofluorescence - Anti-ERp29 antibody (ab11420)

Immunocytochemistry/Immunofluorescence analysis of p19 cells labeling ERp29 with ab11420.

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