abcam

ab170193

Anti-HuR / ELAVL1 antibody [19F12AE12]

KO Validated

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.5 Preservative: 0.02% Sodium azide Constituents: 99% HEPES buffered saline
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	19F12AE12
Purification technique	Precipitation Ammonium Sulphate
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1 µg/mL
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

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

Not recommended

Species	Cow
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Rat
Dilution info	1 µg/mL
Notes	-

Species	Human
Dilution info	1 µg/mL
Notes	-

Species	Mouse
Dilution info	1 µg/mL
Notes	-

Not recommended

Species	Cow
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	5 µg/mL
Notes	-

Expected

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

Not recommended

Species	Cow
Dilution info	-
Notes	-

Target data

See full target information ELAVL1

Function

RNA-binding protein that binds to the 3'-UTR region of mRNAs and increases their stability (PubMed:14517288, PubMed:18285462, PubMed:31358969). Involved in embryonic stem cell (ESC) differentiation: preferentially binds mRNAs that are not methylated by N6-methyladenosine (m6A), stabilizing them, promoting ESC differentiation (By similarity). Has also been shown to be capable of binding to m6A-containing mRNAs and contributes to MYC stability by binding to m6A-containing MYC mRNAs (PubMed:32245947). Binds to poly-U elements and AU-rich elements (AREs) in the 3'-UTR of target mRNAs (PubMed:14731398, PubMed:17632515, PubMed:18285462, PubMed:23519412, PubMed:8626503). Binds avidly to the AU-rich element in FOS and IL3/interleukin-3 mRNAs. In the case of the FOS AU-rich element, binds to a core element of 27 nucleotides that contain AUUUA, AUUUUA, and AUUUUUA motifs. Binds preferentially to the 5'-UUUU[AG]UUU-3' motif in vitro (PubMed:8626503). With ZNF385A, binds the 3'-UTR of p53/TP53 mRNA to control their nuclear export induced by CDKN2A. Hence, may regulate p53/TP53 expression and mediate in part the CDKN2A anti-proliferative activity. May also bind with ZNF385A the CCNB1 mRNA (By similarity). Increases the stability of the leptin mRNA harboring an AU-rich element (ARE) in its 3' UTR (PubMed:29180010).

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

Notes

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

Supplementary info

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

Activity summary	HuR also known as ELAVL1 is a protein that binds RNA in cells. It weighs about 36 kDa and is found in the nucleus and cytoplasm. Its name HuR comes from its similarity to human antigen R. Researchers often call it the HuR protein or ELAVL1 protein. This protein helps stabilize certain mRNA molecules by binding to AU-rich elements (AREs) in their 3' untranslated regions. Its binding affects mRNA decay rates and therefore influences protein synthesis.
Biological function summary	HuR influences cell growth differentiation and stress responses. It does not work alone; it often forms part of larger ribonucleoprotein complexes. By stabilizing mRNAs HuR ensures the continuous production of proteins necessary for cell survival and adaptation to stressors. This regulatory role highlights its involvement in many cellular processes making it a focus for study in relation to cellular homeostasis.
Pathways	HuR is part of the mRNA surveillance pathway and the response to cellular stress. HuR modulates gene expression by interacting with proteins involved in transcription and translation regulation. It frequently partners with proteins like TTP (tristetraprolin) that also bind to AREs affecting mRNA stability and translation processes. Such interactions extend HuR's influence across pathways related to gene expression regulation and response to stress.

Associated diseases and disorders	Researchers associate HuR with cancer and neurodegenerative diseases. In cancer HuR stabilizes mRNAs of many oncogenes aiding tumor growth and progression. It may interact with proteins like p53 affecting tumor suppressor pathways. For neurodegenerative diseases HuR's role in mRNA stability can influence neural health connected to proteins like TDP-43 in conditions such as Alzheimer's and ALS. Understanding HuR's function offers insights into potential therapeutic targets for these diseases.

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

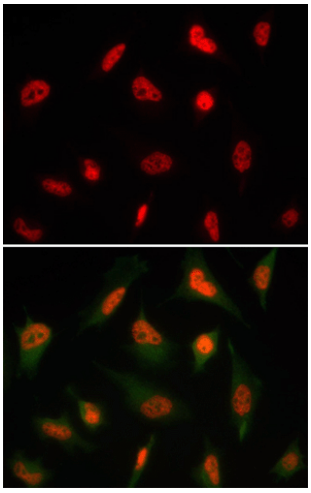
We do not recommend this combination. It is not covered by our product promise.

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

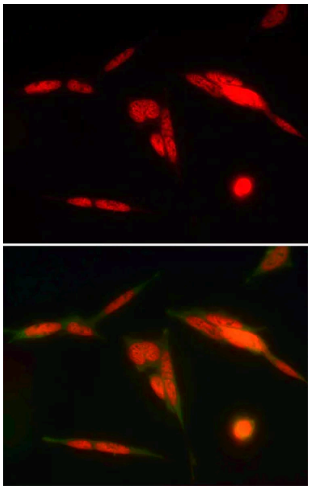


Immunocytochemistry/ Immunofluorescence - Anti-HuR / ELAVL1 antibody [19F12AE12] (ab170193)

HuR / ELAVL1 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-HuR / ELAVL1 antibody

Immunocytochemistry on HeLa cells.
Cells were paraformaldehyde fixed (4%, 20 minutes) and Triton X-100 permeabilized (0.1%, 15minutes). The cells were then incubated with the anti-HuR antibody (5µg/mL) for 2 hours at room temperature or over night at 4°C. The secondary antibody used was (red) Alexa Fluor® 594 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1 hour. A cytoplasmic antibody (ab75834) was used as counter stain (green). 10% goat serum was used as a blocking agent for all blocking steps.

The target protein localizes mainly to the nucleus.

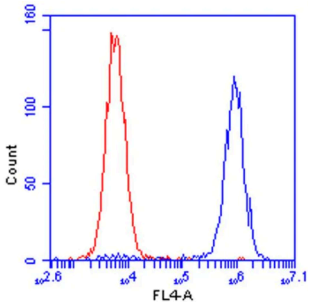


Immunocytochemistry/ Immunofluorescence - Anti-HuR / ELAVL1 antibody [19F12AE12] (ab170193)

HuR / ELAVL1 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-HuR / ELAVL1 antibody

Immunocytochemistry on SH-SY5Y cells (Human neuroblastoma cell line).
Cells cells were paraformaldehyde fixed (4%, 20 minutes) and Triton X-100 permeabilized (0.1%, 15 minutes). The cells were then incubated with the anti-HuR antibody (5µg/mL) for 2 hours at room temperature or overnight at 4°C. The secondary antibody was (red) Alexa Fluor® 594 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. A cytoplasmic antibody (ab75834) was used as counter stain (Green). 10% Goat serum was used as a blocking agent for all blocking steps.

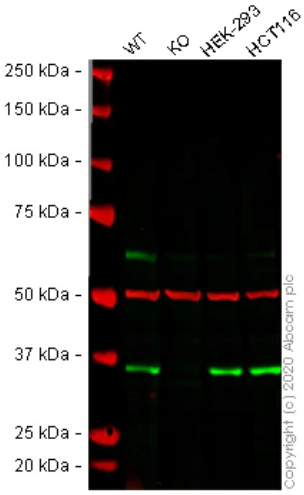
The target protein localizes mainly to the nucleus.



Flow Cytometry - Anti-HuR / ELAVL1 antibody [19F12AE12] (ab170193)

HuR / ELAVL1 Flow Cytometry staining using mouse Anti-HuR / ELAVL1 antibody

Flow cytometric analysis of methanol-fixed HeLa cells labeling HuR / ELAVL1 with ab170193 at 1µg/mL (blue) or an equal amount of an isotype control antibody (red).



Western blot - Anti-HuR / ELAVL1 antibody [19F12AE12] (ab170193)

HuR / ELAVL1 Western blot staining using mouse Anti-HuR / ELAVL1 antibody

Lanes 1 - 4: Merged signal (red and green). Green - ab170193 observed at 36 kDa. Red - loading control, ab52866 (Rabbit anti-alpha Tubulin antibody [EP1332Y]) observed at 55kDa. ab170193 was shown to react with ELAVL1 in wild-type SW480 cells in western blot. Loss of signal was observed when ELAVL1 knockout sample was used. Wild-type and ELAVL1 knockout SW480 cell lysates were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBS-T (0.1% Tween®) before incubation with ab170193 and ab52866 (Rabbit anti-alpha Tubulin antibody [EP1332Y]) overnight at 4°C at 2 µg/ml and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed (ab216772) and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed (ab216777) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-HuR / ELAVL1 antibody [19F12AE12] (ab170193) at 2 µg/mL

Lane 1:
Wild-type SW480 (Human colorectal adenocarcinoma cell line) whole cell lysate at 40 µg

Lane 2:
ELAVL1 knockout SW480 (Human colorectal adenocarcinoma cell line) whole cell lysate at 40 µg

Lane 2:
Western blot - Human ELAVL1 knockout SW480 cell line (ab270485)

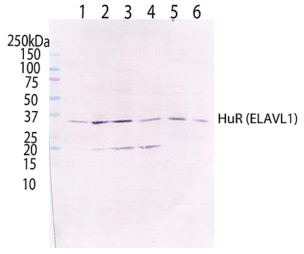
Lane 3:
HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate at 20 µg

Lane 4:
HCT 116 (Human colorectal carcinoma cell line) whole cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 36 kDa

Observed band size: 36 kDa



Western blot - Anti-HuR / ELAVL1 antibody [19F12AE12] (ab170193)

HuR / ELAVL1 Western blot staining using mouse Anti-HuR / ELAVL1 antibody

All lanes:
Western blot - Anti-HuR / ELAVL1 antibody [19F12AE12] (ab170193) at 1 µg/mL

Lane 1:
H9C2 Rat Cell Lysate at 20 µg

Lane 2:
H4IIE Rat Cell Lysate at 20 µg

Lane 3:
MEF Mouse Cell Lysate at 20 µg

Lane 4:
3T3 Mouse Cell Lysate at 20 µg

Lane 5:
SH-SY5Y Cell Lysate at 20 µg

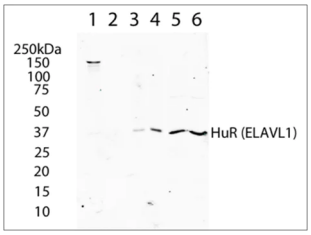
Lane 6:
HepG2 Cell Lysate at 20 µg

Secondary

All lanes:
Goat anti-mouse AP at 1/5000 dilution

Developed using the ECL technique.

Predicted band size: 36 kDa



Western blot - Anti-HuR / ELAVL1 antibody [19F12AE12] (ab170193)

All lanes:
Western blot - Anti-HuR / ELAVL1 antibody [19F12AE12] (ab170193) at 1 µg/mL

Lane 1:
Human Liver Homogenate at 20 µg

Lane 2:
Human Heart Homogenate at 20 µg

Lane 3:
HepG2 Cell Lysate at 20 µg

Lane 4:
HeLa Cell Lysate at 20 µg

Lane 5:
SH-SY5Y Cell Lysate at 20 µg

Lane 6:
Jurkat Cell Lysate at 20 µg

Secondary

All lanes:
Goat anti-mouse IR800 at 1/5000 dilution

Developed using the ECL technique.

Predicted band size: 36 kDa

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