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DENR Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8489b

Product Information

Application	WB, IHC-P, FC, IF, E
Primary Accession	O43583
Reactivity	Human, Mouse
Host	Mouse
Clonality	monoclonal
Isotype	IgG2b,κ
Clone Names	1542CT106.51.79
Calculated MW	22092

Additional Information

Gene ID	8562
Other Names	Density-regulated protein, DRP, Protein DRP1, Smooth muscle cell-associated protein 3, SMAP-3, DENR, DRP1
Target/Specificity	This DENR antibody is generated from a mouse immunized with a recombinant protein of human DENR.
Dilution	WB~~1:1000-1:2000 IHC-P~~1:100~500 FC~~1:25 IF~~1:25 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	DENR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DENR
Synonyms	DRP1
Function	Translation regulator forming a complex with MCTS1 to promote translation reinitiation. Translation reinitiation is the process where the small ribosomal subunit remains attached to the mRNA following termination of translation of

a regulatory upstream ORF (uORF), and resume scanning on the same mRNA molecule to initiate translation of a downstream ORF, usually the main ORF (mORF). The MCTS1/DENR complex is pivotal to two linked mechanisms essential for translation reinitiation. Firstly, the dissociation of deacylated tRNAs from post- termination 40S ribosomal complexes during ribosome recycling. Secondly, the recruitment in an EIF2-independent manner of aminoacylated initiator tRNA to P site of 40S ribosomes for a new round of translation. This regulatory mechanism governs the translation of more than 150 genes which translation reinitiation is MCTS1/DENR complex-dependent.

Cellular Location Cytoplasm.

Tissue Location Highly expressed in heart and skeletal muscle and moderately expressed in the brain, placenta, liver and pancreas. Weakly expressed in the lung and kidney.

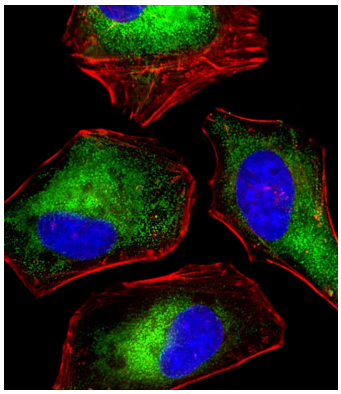
Background

May be involved in the translation of target mRNAs by scanning and recognition of the initiation codon. Involved in translation initiation; promotes recruitmnet of aminoacetyled initiator tRNA to P site of 40S ribosomes. Can promote release of deacylated tRNA and mRNA from recycled 40S subunits following ABCE1-mediated dissociation of post-termination ribosomal complexes into subunits. Plays a role in the modulation of the translational profile of a subset of cancer-related mRNAs when recruited to the translational initiation complex by the oncogene MCTS1.

References

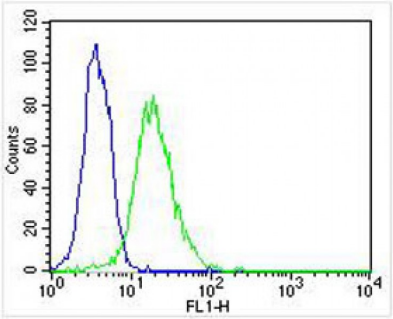
Deyo J.E.,et al.DNA Cell Biol. 17:437-447(1998).
Nishimoto S.,et al.Submitted (MAY-1998) to the EMBL/GenBank/DDBJ databases.
Scherer S.E.,et al.Nature 440:346-351(2006).
Oh J.J.,et al.Nucleic Acids Res. 27:4008-4017(1999).
Reinert L.S.,et al.Cancer Res. 66:8994-9001(2006).

Images

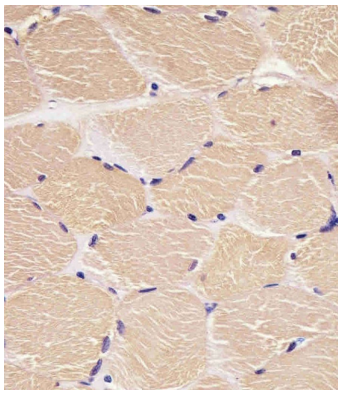


Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human cervical epithelial adenocarcinoma cell line) cells labeling DENR with AM8489b at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG (NA166821) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on HeLa cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (PD18466410) at 1/100 dilution (red).The nuclear counter stain is DAPI (blue).

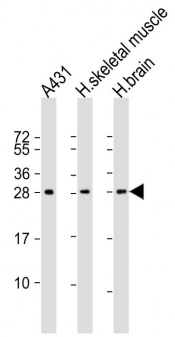
Overlay histogram showing Hela cells stained with AM8489b (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AM8489b, 1:25 dilution) for 60 min at 37ºC. The



secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(NA168821) at 1/400 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was mouse IgG2b (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



AM8489b staining DENR in human skeletal muscle sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



All lanes : Anti-DENR Antibody at 1:1000-1:2000 dilution Lane 1: A431 whole cell lysate Lane 2: human skeletal muscle lysate Lane 3: human brain lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 22 kDa Blocking/Dilution buffer: 5% NFDM/TBST.