

**DENR Antibody**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AM8489b**

**Specification**

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**DENR Antibody - Product Information**

Application	IF, WB, IHC-P, FC,E
Primary Accession	<a href="#">O43583</a>
Reactivity	Human
Host	Mouse
Clonality	monoclonal
Isotype	IgG2b, $\kappa$
Calculated MW	22092

**DENR Antibody - 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**

IF~~1:25  
WB~~1:1000-1:2000  
IHC-P~~1:25  
FC~~1:25

**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.

**DENR Antibody - 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**

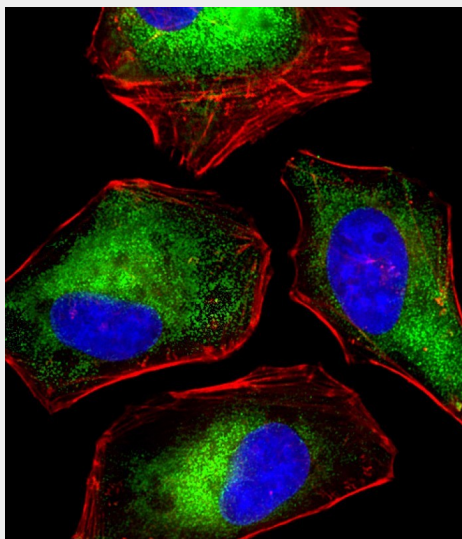
Highly expressed in heart and skeletal muscle and moderately expressed in the brain, placenta, liver and pancreas. Weakly expressed in the lung and kidney.

#### **DENR Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

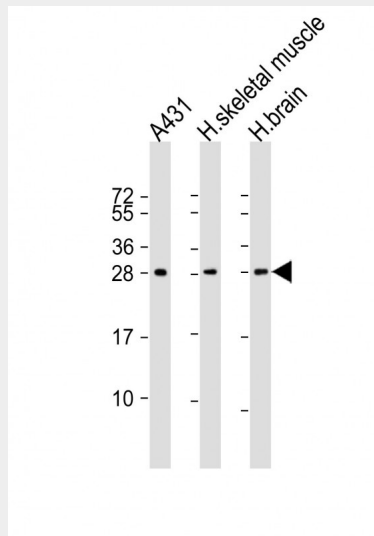
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **DENR Antibody - Images**

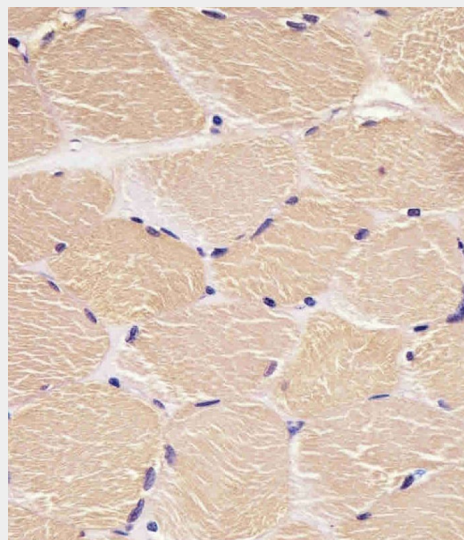


Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human cervical epithelial adenocarcinoma cell line) cells labeling DENR with AM8489b at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG (NA166821) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on

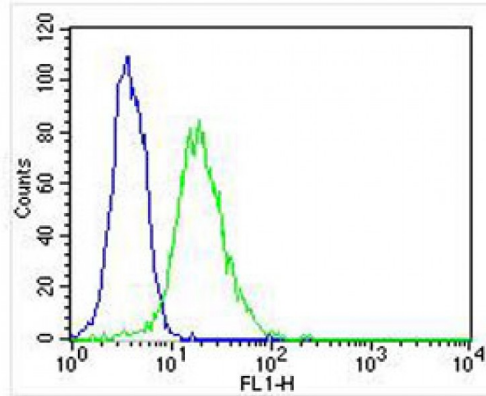
HeLa cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (PD18466410) at 1/100 dilution (red).The nuclear counter stain is DAPI (blue).



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.



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.



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 incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AM8489b, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(NA168821) at 1/400 dilution for 40 min at 37°C. Isotype control antibody (blue line) was mouse IgG2b (1µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >10,000 events was performed.

### **DENR Antibody - Background**

May be involved in the translation of target mRNAs by scanning and recognition of the initiation codon. Involved in translation initiation; promotes recruitment of aminoacylated 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.

### **DENR Antibody - 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).