

ADPRHL2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP9723a

Product Information

Application	WB, FC, E
Primary Accession	Q9NX46
Other Accession	Q8CG72 , Q3SYV9
Reactivity	Human
Predicted	Bovine, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB24239
Calculated MW	38947
Antigen Region	87-114

Additional Information

Gene ID	54936
Other Names	Poly(ADP-ribose) glycohydrolase ARH3, ADP-ribosylhydrolase 3, [Protein ADP-ribosylarginine] hydrolase-like protein 2, ADPRHL2, ARH3
Target/Specificity	This ADPRHL2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 87-114 amino acids from the N-terminal region of human ADPRHL2.
Dilution	WB~~1:1000 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	ADPRHL2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ADPRS (HGNC:21304)
Function	ADP-ribosylhydrolase that preferentially hydrolyzes the scissile alpha-O-linkage attached to the anomeric C1'' position of ADP- ribose and acts

on different substrates, such as proteins ADP- ribosylated on serine and threonine, free poly(ADP-ribose) and O- acetyl-ADP-D-ribose (PubMed:[21498885](#), PubMed:[29907568](#), PubMed:[30045870](#), PubMed:[30401461](#), PubMed:[30830864](#), PubMed:[33186521](#), PubMed:[33769608](#), PubMed:[33894202](#), PubMed:[34019811](#), PubMed:[34321462](#), PubMed:[34479984](#), PubMed:[34625544](#)). Specifically acts as a serine mono-ADP- ribosylhydrolase by mediating the removal of mono-ADP-ribose attached to serine residues on proteins, thereby playing a key role in DNA damage response (PubMed:[28650317](#), PubMed:[29234005](#), PubMed:[30045870](#), PubMed:[33186521](#), PubMed:[34019811](#), PubMed:[34625544](#)). Serine ADP- ribosylation of proteins constitutes the primary form of ADP- ribosylation of proteins in response to DNA damage (PubMed:[29480802](#), PubMed:[33186521](#), PubMed:[34625544](#)). Does not hydrolyze ADP-ribosyl- arginine, -cysteine, -diphthamide, or -asparagine bonds (PubMed:[16278211](#), PubMed:[33769608](#)). Also able to degrade protein free poly(ADP-ribose), which is synthesized in response to DNA damage: free poly(ADP-ribose) acts as a potent cell death signal and its degradation by ADPRHL2 protects cells from poly(ADP-ribose)-dependent cell death, a process named parthanatos (PubMed:[16278211](#)). Also hydrolyzes free poly(ADP-ribose) in mitochondria (PubMed:[22433848](#)). Specifically digests O-acetyl-ADP-D-ribose, a product of deacetylation reactions catalyzed by sirtuins (PubMed:[17075046](#), PubMed:[21498885](#)). Specifically degrades 1''-O-acetyl-ADP-D-ribose isomer, rather than 2''-O-acetyl- ADP-D-ribose or 3''-O-acetyl-ADP-D-ribose isomers (PubMed:[21498885](#)).

Cellular Location

Nucleus. Cytoplasm. Chromosome Mitochondrion matrix Note=Recruited to DNA lesion regions following DNA damage; ADP-D- ribose-recognition is required for recruitment to DNA damage sites

Tissue Location

Ubiquitous (PubMed:[16278211](#)). Expressed in skin fibroblasts (PubMed:[30830864](#)).

Background

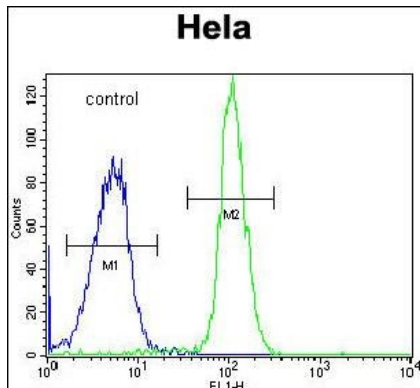
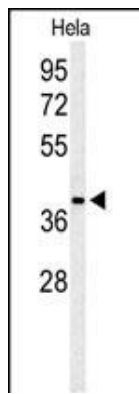
ADPRHL2 is a member of the ADP-ribosylglycohydrolase family. The enzyme catalyzes the removal of ADP-ribose from ADP-ribosylated proteins. This enzyme localizes to the mitochondria, in addition to the nucleus and cytoplasm.

References

Niere, M., et al. Mol. Cell. Biol. 28(2):814-824(2008)
 Ono, T., et al. Proc. Natl. Acad. Sci. U.S.A. 103(45):16687-16691(2006)
 Mueller-Dieckmann, C., et al. Proc. Natl. Acad. Sci. U.S.A. 103(41):15026-15031(2006)

Images

Western blot analysis of ADPRHL2 Antibody (N-term) (Cat. #AP9723a) in Hela cell line lysates (35ug/lane). ADPRHL2 (arrow) was detected using the purified Pab.



ADPRHL2 Antibody (N-term) (Cat. #AP9723a) flow cytometric analysis of HeLa cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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