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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, Rat, Canine, Rabbit
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

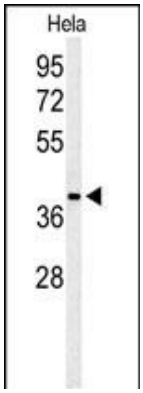
ADPRHL2 is a member of the ADP-ribosylglycohydrolase family. The enzyme catalyzes the removal of ADP-ribose from ADP-ribosylated proteins. This enzyme localizes to the mitochondria, in addition to the nucleus and cytoplasm.

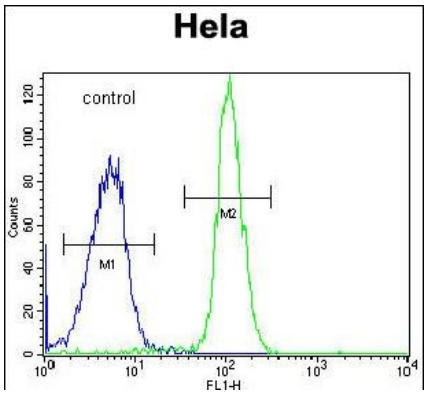
References

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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