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ADPRHL2 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP9723a

Specification

ADPRHL2 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q9NX46

ADPRHL2 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 54936

Other Names
Poly(ADP-ribose) glycohydrolase ARH3, ADP-ribosylhydrolase 3, [Protein ADP-ribosylarginine] hydrolase-like protein 2, ADPRHL2, ARH3

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ADPRHL2 Antibody (N-term) Blocking Peptide - 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).

ADPRHL2 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

ADPRHL2 Antibody (N-term) Blocking Peptide - Images

ADPRHL2 Antibody (N-term) Blocking Peptide - 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.

ADPRHL2 Antibody (N-term) Blocking Peptide - 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)