

MARCH5 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP5677a

Product Information

Application WB, IHC-P-Leica, E

Primary Accession Q9NX47

Other Accession <u>Q6GM44</u>, <u>Q3KNM2</u>, <u>Q5ZI41</u>, <u>Q3ZC24</u>, <u>NP 060294</u>

Reactivity Human, Mouse

Predicted Chicken, Bovine, Xenopus

HostRabbitClonalityPolyclonalIsotypeRabbit IgGClone NamesRB21862Calculated MW31232Antigen Region4-32

Additional Information

Gene ID 54708

Other Names E3 ubiquitin-protein ligase MARCH5, 632-, Membrane-associated RING finger

protein 5, Membrane-associated RING-CH protein V, MARCH-V, Mitochondrial

ubiquitin ligase, MITOL, RING finger protein 153, MARCH5, RNF153

Target/Specificity This MARCH5 antibody is generated from rabbits immunized with a KLH

conjugated synthetic peptide between 4-32 amino acids from the N-terminal

region of human MARCH5.

Dilution WB~~1:1000 IHC-P-Leica~~1:500 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 MARCH5 Antibody (N-term) is for research use only and not for use in

diagnostic or therapeutic procedures.

Protein Information

Name MARCHF5 (HGNC:26025)

Synonyms

MARCH5, RNF153

Function

Mitochondrial E3 ubiquitin-protein ligase that plays a crucial role in the control of mitochondrial morphology by acting as a positive regulator of mitochondrial fission and as an important regulator of immune response (PubMed:16874301, PubMed:17606867, PubMed:26246171, PubMed:31881323). Plays a crucial role in maintaining mitochondrial homeostasis by regulating the dynamics of mitochondria through the ubiquitination of key proteins involved in fission and fusion such as FIS1, DNM1L and MFN1 (PubMed: 16874301, PubMed: 17606867). Acts as a critical determinant of mitotic apoptosis through both MCL1- dependent and -independent pathways (By similarity). Turns off persistent immune signaling by degrading oligomeric complexes of retinoic acid-inducible gene I/DDX58 and mitochondrial antiviral- signaling protein/MAVS formed upon RNA virus infection (PubMed: 26246171, PubMed: 31881323). Promotes STING-mediated type-I interferon production via 'Lys-63'-linked ubiquitination of STING1 thereby preserving its activity and preventing the formation of inactive STING1 polymers (PubMed: <u>37916870</u>). Plays also an essential role in the formation of PEX3-containing vesicles in the de novo biogenesis of peroxisomes from mitochondria (PubMed:39423820, PubMed:39423819). Acts as a regulator of NLRP3 inflammasome activation on the mitochondria by mediating the 'Lys-27'-linked polyubiquitination of NLRP3, positively regulating the NLRP3-NEK7 complex formation and NLRP3 oligomerization (PubMed: 37575012).

Cellular Location

Mitochondrion outer membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane; Multi-pass membrane protein. Peroxisome membrane. Note=Authors show that the protein can be detected in endoplasmic reticulum (PubMed:14722266). Authors (PubMed:16874301) show its presence only in mitochondria (PubMed:16874301).

Tissue Location

Expressed in brain, heart, liver, lung, spleen, stomach, testis, skeletal and muscle.

Background

MARCH5 is a ubiquitin ligase of the mitochondrial outer membrane that plays a role in the control of mitochondrial morphology by regulating mitofusin-2 (MFN2; MIM 608507) and DRP1 (DNM1L; MIM 603850) (Nakamura et al., 2006 [PubMed 16936636]).

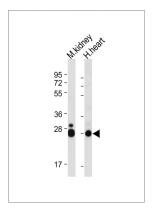
References

Yonashiro, R., et al. Mol. Biol. Cell 20(21):4524-4530(2009) Karbowski, M., et al. J. Cell Biol. 178(1):71-84(2007) Nakamura, N., et al. EMBO Rep. 7(10):1019-1022(2006)

Images

Immunohistochemical analysis of paraffin-embedded human heart tissue using AP5677A performed on the Leica® BOND RXm. Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:500) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.





All lanes: Anti-MARCH5 Antibody (N-term) at 1:2000 dilution Lane 1: Mouse kidney tissue lysate Lane 2: Human heart tissue lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size: 31 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.