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KARS Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11097a

Specification

KARS Antibody (N-term) - Product Information

Application	**WB, FC,E**
Primary Accession	Q15046
Other Accession	NP_005539.1, NP_001123561.1
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**68048**
Antigen Region	**70-98**

KARS Antibody (N-term) - Additional Information

Gene ID 3735

Other Names
Lysine--tRNA ligase, Lysyl-tRNA synthetase, LysRS, KARS, KIAA0070

Target/Specificity
This KARS antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 70-98 amino acids from the N-terminal region of human KARS.

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 prepared by Saturated Ammonium Sulfate (SAS) precipitation 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
KARS Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

KARS Antibody (N-term) - Protein Information

Name KARS1 (HGNC:6215)

Synonyms KARS, KIAA0070

Function Catalyzes the specific attachment of an amino acid to its cognate tRNA in a 2 step reaction: the amino acid (AA) is first activated by ATP to form AA-AMP and then transferred to the acceptor end of the tRNA (PubMed:18029264, PubMed:18272479, PubMed:9278442). When secreted, acts as a signaling molecule that induces immune response through the activation of monocyte/macrophages (PubMed:15851690). Catalyzes the synthesis of the signaling molecule diadenosine tetraphosphate (Ap4A), and thereby mediates disruption of the complex between HINT1 and MITF and the concomitant activation of MITF transcriptional activity (PubMed:14975237, PubMed:19524539, PubMed:23159739, PubMed:5338216).

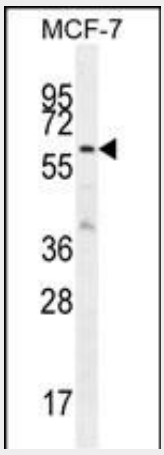
Cellular Location
[Isoform Cytoplasmic]: Cytoplasm, cytosol. Cytoplasm. Nucleus. Cell membrane; Peripheral membrane protein. Secreted Note=Secretion is induced by TNF-alpha (PubMed:15851690). Cytosolic in quiescent mast cells. Translocates into the nucleus in response to mast cell activation by immunoglobulin E (PubMed:23159739)

KARS Antibody (N-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KARS Antibody (N-term) - Images



KARS Antibody (N-term) (Cat. #AP11097a) western blot analysis in MCF-7 cell line lysates (35ug/lane).This demonstrates the KARS antibody detected the KARS protein (arrow).

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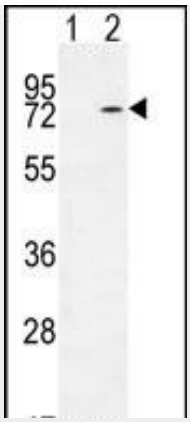
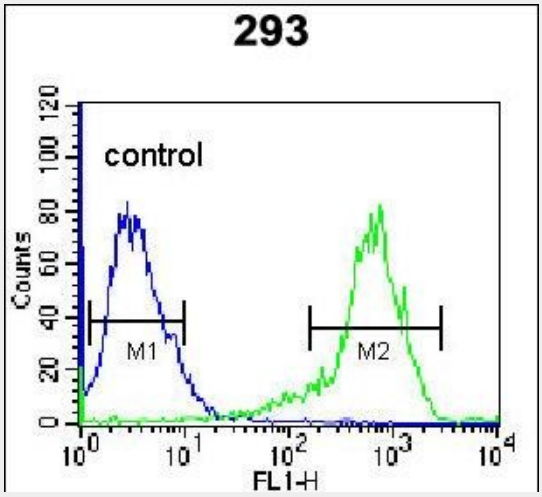


Western blot analysis of KARS (arrow) using rabbit polyclonal KARS Antibody (N-term) (Cat. #AP11097a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the KARS gene.



KARS Antibody (N-term) (Cat. #AP11097a) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

KARS Antibody (N-term) - Background

Aminoacyl-tRNA synthetases are a class of enzymes that charge tRNAs with their cognate amino acids. Lysyl-tRNA synthetase is a homodimer localized to the cytoplasm which belongs to the class II family of tRNA synthetases. It has been shown to be a target of autoantibodies in the human autoimmune diseases, polymyositis or dermatomyositis. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.

KARS Antibody (N-term) - References

McLaughlin, H.M., et al. Am. J. Hum. Genet. 87(4):560-566(2010)
Kepp, O., et al. Cell Cycle 9(15):3072-3077(2010)
Segat, L., et al. Vaccine 28(10):2201-2206(2010)
Dastani, Z., et al. Eur. J. Hum. Genet. 18(3):342-347(2010)
Kawamata, H., et al. J. Biol. Chem. 283(42):28321-28328(2008)