

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](#)).

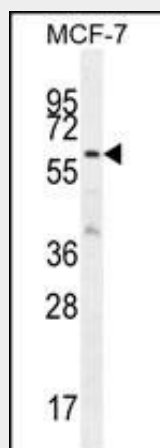
Cellular Location

[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)

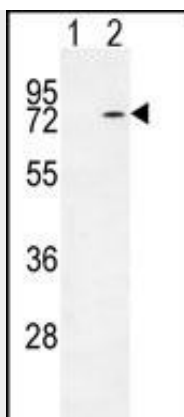
KARS Antibody (N-term) - Protocols

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

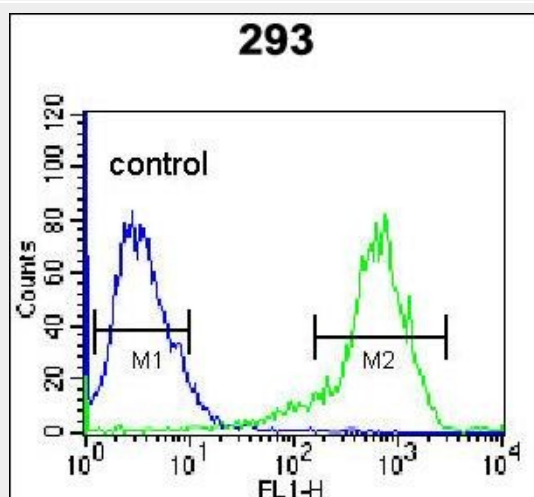
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

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).



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)