

KARS Antibody (clone 8G12C1)
Mouse Monoclonal Antibody
Catalog # ALS13151**Specification**

KARS Antibody (clone 8G12C1) - Product Information

Application	WB, IHC
Primary Accession	Q15046
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	68kDa KDa

KARS Antibody (clone 8G12C1) - Additional Information**Gene ID** 3735**Other Names**

Lysine--tRNA ligase, 6.1.1.6, Lysyl-tRNA synthetase, LysRS, KARS, KIAA0070

Target/Specificity

Human KARS

Reconstitution & Storage

Long term: -20°C; Short term: +4°C. Avoid repeat freeze-thaw cycles.

Precautions

KARS Antibody (clone 8G12C1) is for research use only and not for use in diagnostic or therapeutic procedures.

KARS Antibody (clone 8G12C1) - 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: [9278442](http://www.uniprot.org/citations/9278442)), PubMed: [18029264](http://www.uniprot.org/citations/18029264), PubMed: [18272479](http://www.uniprot.org/citations/18272479)). When secreted, acts as a signaling molecule that induces immune response through the activation of monocyte/macrophages (PubMed: [15851690](http://www.uniprot.org/citations/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: [5338216](http://www.uniprot.org/citations/5338216))

target="_blank">5338216, PubMed:14975237, PubMed:19524539, PubMed:23159739).

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)

Volume

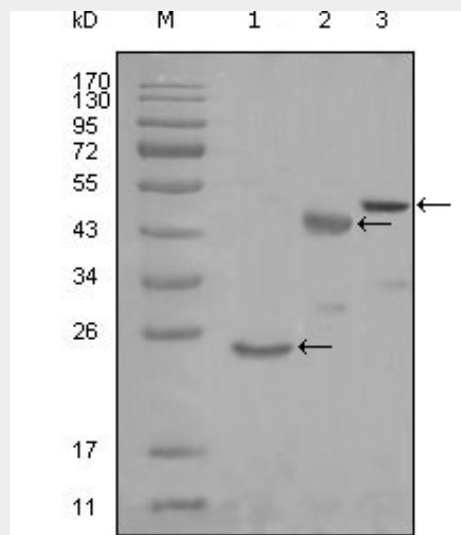
50 µl

KARS Antibody (clone 8G12C1) - Protocols

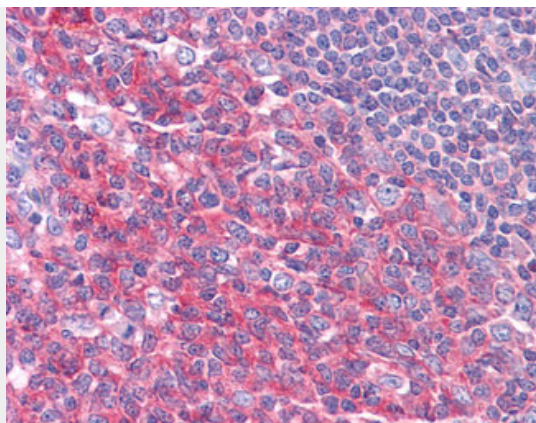
Provided below are standard protocols that you may find useful for product applications.

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

KARS Antibody (clone 8G12C1) - Images



Western blot using KARS mouse monoclonal antibody against truncated Trx-KARS recombinant protein...



Anti-KARS antibody IHC of human tonsil.

KARS Antibody (clone 8G12C1) - Background

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. When secreted, acts as a signaling molecule that induces immune response through the activation of monocyte/macrophages. Catalyzes the synthesis of diadenosine oligophosphate (Ap4A), a signaling molecule involved in the activation of MITF transcriptional activity. Interacts with HIV-1 virus GAG protein, facilitating the selective packaging of tRNA(3)(Lys), the primer for reverse transcription initiation.

KARS Antibody (clone 8G12C1) - References

Shiba K.,et al.J. Biol. Chem. 272:22809-22816(1997).
Tolkunova E.,et al.J. Biol. Chem. 275:35063-35069(2000).
Nomura N.,et al.DNA Res. 1:223-229(1994).
Martin J.,et al.Nature 432:988-994(2004).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.