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KD-Validated Anti-Lysyl-tRNA synthetase 1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1074

Specification

KD-Validated Anti-Lysyl-tRNA synthetase 1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q15046
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 68 kDa, observed, 73 kDa KDa**
Gene Name	**KARS1**
Aliases	**KARS1; Lysyl-TRNA Synthetase 1; KARS2; KARS; Lysyl-TRNA Synthetase; Lysine--TRNA Ligase; Lysine TRNA Ligase; EC 6.1.1.6; DFNB89; LysRS; Deafness, Autosomal Recessive 89; EC 2.7.7.-; KIAA0070; EC 6.1.1; CMTRIB; DEAPLE; LEPID; KRS**
Immunogen	**A synthesized peptide derived from human LysRS**

KD-Validated Anti-Lysyl-tRNA synthetase 1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**3735**

Other Names
Lysine--tRNA ligase, 2.7.7.-, 6.1.1.6, Lysyl-tRNA synthetase, LysRS, KARS1 (HGNC:6215), KARS, KIAA0070

KD-Validated Anti-Lysyl-tRNA synthetase 1 Rabbit Monoclonal Antibody - 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:<a

href="http://www.uniprot.org/citations/15851690" target="_blank">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).

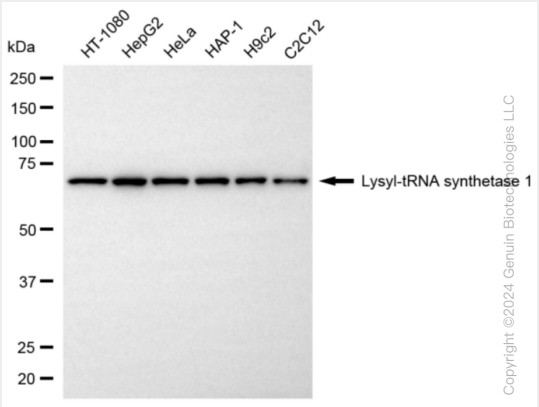
Cellular Location
[Isoform Cytoplasmic]: Cytoplasm, cytosol. Cytoplasm. Nucleus. Cell membrane; Peripheral membrane protein. Secreted Note=Secretion is induced by TNF-alpha (PubMed:15851690). Cytosolic in quiescent mast cells. Translocates into the nucleus in response to mast cell activation by immunoglobulin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

KD-Validated Anti-Lysyl-tRNA synthetase 1 Rabbit Monoclonal Antibody - 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

KD-Validated Anti-Lysyl-tRNA synthetase 1 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-lysyl-tRNA synthetase 1 antibody (Cat#AGI1074). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-lysyl-tRNA synthetase 1 antibody (Cat#AGI1074, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

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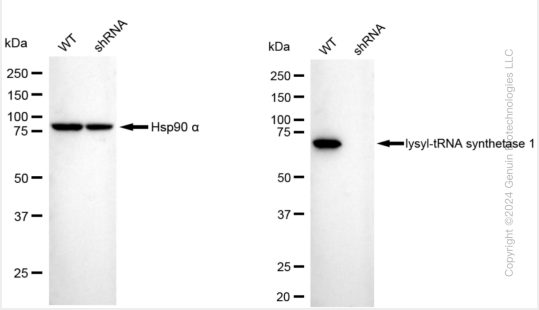
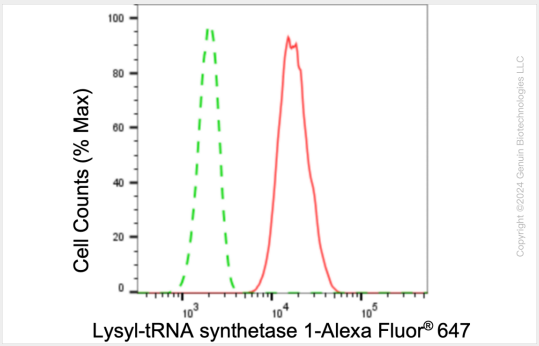
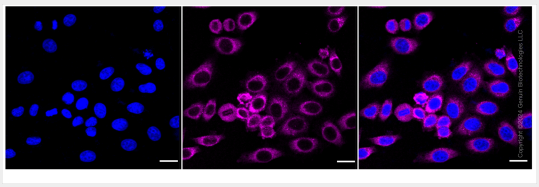


Western blotting analysis using anti-lysyl-tRNA synthetase 1 antibody (Cat#AGI1074). Lysyl-tRNA synthetase 1 expression in wild-type (WT) and lysyl-tRNA synthetase 1 (KARS1) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-lysyl-tRNA synthetase 1 antibody (Cat#AGI1074, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of lysyl-tRNA synthetase 1 expression in HepG2 cells using lysyl-tRNA synthetase 1 antibody (AGI1074, 1:2,000). Green, isotype control; red, lysyl-tRNA synthetase 1.



Immunocytochemical staining of HepG2 cells with anti-lysyl-tRNA synthetase 1 antibody (Cat#AGI1074, 1:1,000). Nuclei were stained blue with DAPI; Lysyl-tRNA synthetase 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: High. Scale bar: 20 µm.