Product datasheet

Anti-LysRS antibody ab31532

Product name: Anti-LysRS antibody
Description: Rabbit polyclonal to LysRS
Host species: Rabbit
Tested applications: Suitable for: ICC/IF, IHC-P, IP, WB
Species reactivity: Reacts with: Mouse, Human
Immunogen: Recombinant full length protein corresponding to Human LysRS.
General notes: Previously labelled as Lysyl tRNA synthetase.

Properties

Form: Liquid
Storage buffer: Preservative: 0.05% Sodium azide
Constituent: Whole serum
Purity: Whole antiserum
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab31532 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td></td>
<td>Use at an assay dependent concentration. PubMed: 21460219</td>
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<tr>
<td>IHC-P</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>IP</td>
<td></td>
<td>1/3000 - 1/8000.</td>
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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. 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.

Involvement in disease
Defects in KARS are the cause of Charcot-Marie-Tooth disease recessive intermediate type B (CMTRIB) [MIM:613641]; also called Charcot-Marie-Tooth neuropathy recessive intermediate B. CMTRIB is a form of Charcot-Marie-Tooth disease, a disorder of the peripheral nervous system, characterized by progressive weakness and atrophy, initially of the peroneal muscles and later of the distal muscles of the arms. Recessive intermediate forms of Charcot-Marie-Tooth disease are characterized by clinical and pathologic features intermediate between demyelinating and axonal peripheral neuropathies, and motor median nerve conduction velocities ranging from 25 to 45 m/sec.

Sequence similarities
Belongs to the class-II aminoacyl-tRNA synthetase family.

Domain
The N-terminal domain (1-65) of the cytoplasmic isoform is a functional tRNA-binding domain (By similarity), is required for nuclear localization, is involved in the interaction with DARS, but has a repulsive role in the binding to EEF1A1. A central domain (208-259) is involved in homodimerization and is required for interaction with HIV-1 GAG and incorporation into virions. The C-terminal domain (452-597) is not required for interaction with AIMP2.

Cellular localization

Images

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
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<tbody>
<tr>
<td>WB</td>
<td></td>
<td>1/8000. Predicted molecular weight: 74 kDa.</td>
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</table>
ab31532 staining LysRS in normal human breast tissue by Immunohistochemistry (paraffin embedded sections).

**Western blot - Anti-LysRS antibody (ab31532)**

- **All lanes**: Anti-LysRS antibody (ab31532)
- **Lane 1**: HEK293 cell lysate
- **Lane 2**: A549 cell lysate
- **Lane 3**: HCC1208 cell lysate

**Predicted band size**: 74 kDa
**Observed band size**: 74 kDa

**Please note**: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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