abcam

Product datasheet

Anti-LysRS antibody [EPR7921] ab129080

Recombinant RabMAb

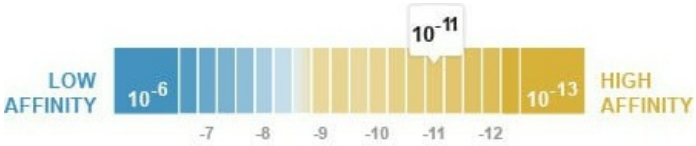
4 References 5 Images

Overview

Product name	Anti-LysRS antibody [EPR7921]
Description	Rabbit monoclonal [EPR7921] to LysRS
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF **Unsuitable for:** Flow Cyt
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat
Immunogen	Synthetic peptide corresponding to Human LysRS aa 550-650. Database link: **Q15046**
Positive control	Jurkat, HeLa, 293T, HepG2, and Caco 2 cell lysates; Human colon tissue This antibody gave a positive result when used in the following methanol fixed cell lines: CACO-2
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Dissociation constant (K_D)	$K_D = 1.44 \times 10^{-11}$ M



Learn more about K_D

Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR7921
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab129080 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000 - 1/10000. Detects a band of approximately 74 kDa (predicted molecular weight: 68 kDa).
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ICC/IF		1/100 - 1/250.

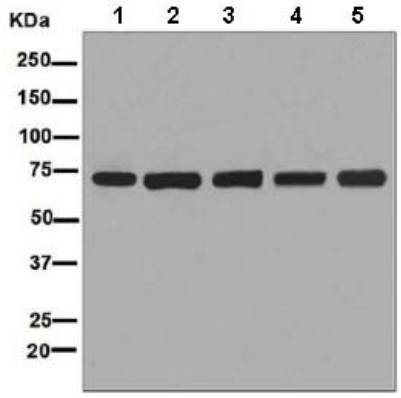
Application notes Is unsuitable for Flow Cyt.

Target

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	Mitochondrion and Cytoplasm. Nucleus. Cell membrane. Secreted. Secretion is induced by TNF-alpha.

Images



Western blot - Anti-LysRS antibody [EPR7921] (ab129080)

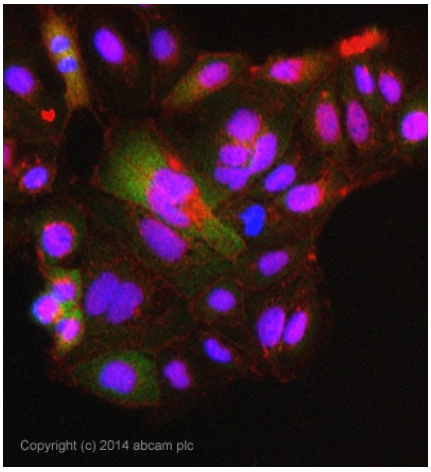
All lanes : Anti-LysRS antibody [EPR7921] (ab129080) at 1/1000 dilution

Lane 1 : Jurkat cell lysate
Lane 2 : HeLa cell lysate
Lane 3 : 293T cell lysate
Lane 4 : HepG2 cell lysate
Lane 5 : Caco-2 cell lysate

Lysates/proteins at 10 µg per lane.

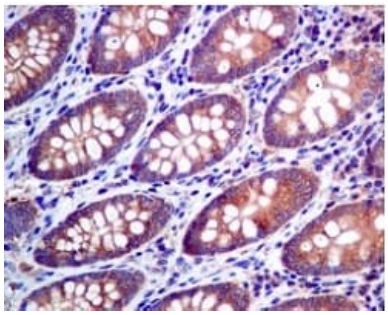
Secondary
All lanes : HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 68 kDa



Immunocytochemistry/ Immunofluorescence - Anti-LysRS antibody [EPR7921] (ab129080)

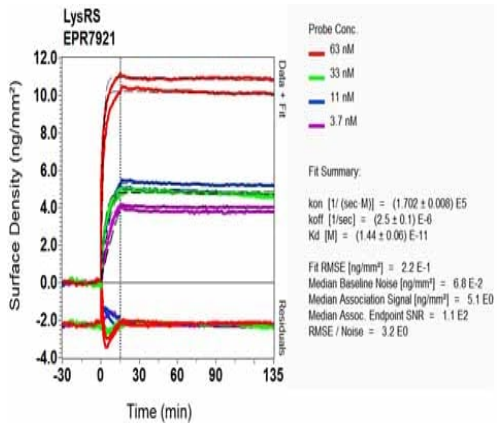
ICC/IF image of ab129080 stained CACO-2 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab129080 at 1/200 dilution overnight at +4°C. The secondary antibody (pseudo-colored green) was Alexa Fluor® 488 goat anti-rabbit (**ab150081**) IgG (H+L) preadsorbed, used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (pseudo-colored red) at a 1/200 dilution for 1h at room temperature. DAPI was used to stain the cell nuclei (pseudo-colored blue) at a concentration of 1.43µM for 1hour at room temperature.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LysRS antibody [EPR7921] (ab129080)

ab129080, at a dilution of 1/50, staining LysRS in paraffin embedded Human colon tissue by immunohistochemistry.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

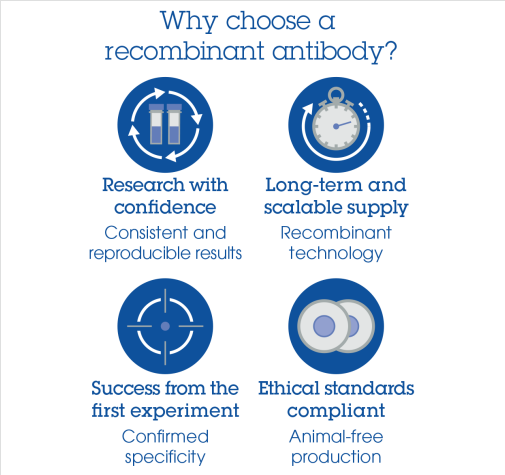


OI-RD Scanning - Anti-LysRS antibody [EPR7921] (ab129080)

Equilibrium disassociation constant (K_D)

Learn more about K_D

Click here to learn more about K_D



Anti-LysRS antibody [EPR7921] (ab129080)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors