Datasheet for ABIN2854634

anti-KLC1 antibody

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Overview

Quantity:	100 µL
Target:	KLC1
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This KLC1 antibody is un-conjugated
Application:	Western Blotting (WB)

Product Details

Immunogen:	Recombinant protein encompassing a sequence within the center region of human KLC1. The exact sequence is proprietary.
Isotype:	IgG
Cross-Reactivity:	Human
Characteristics:	Rabbit polyclonal antibody to KLC1 (kinesin light chain 1) KLC1 antibody [N2C2], Internal
Purification:	Purified by antigen-affinity chromatography.

Target Details

Target:	KLC1
Alternative Name:	kinesin light chain 1 (KLC1 Products)

Target Details

Molecular Weight:	65 kDa
Gene ID:	3831
UniProt:	Q07866
Pathways:	Ribonucleoprotein Complex Subunit Organization

Application Details

Application Notes:	WB: 1:500-1:3000. Optimal dilutions/concentrations should be determined by the researcher. Not tested in other applications.
Comment:	Positive Control: A549 Validation: KO/KD, Orthogonal
Restrictions:	For Research Use only

Handling

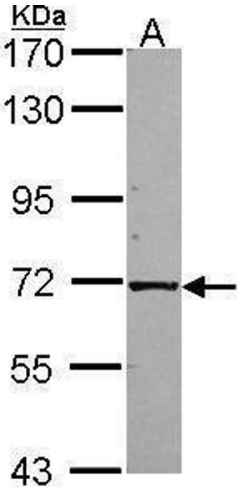
Format:	Liquid
Concentration:	0.42 mg/mL
Buffer:	0.1M Tris-Glycine (pH 7), 20 % Glycerol, 0.01 % Thimerosal
Preservative:	Thimerosal (Merthiolate)
Precaution of Use:	This product contains Thimerosal (Merthiolate): a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store as concentrated solution. Centrifuge briefly prior to opening vial. For short-term storage (1-2 weeks), store at 4°C. For long-term storage, aliquot and store at -20°C or below. Avoid multiple freeze-thaw cycles.

Publications

Product cited in:	Holt, Fuller, Lam, Sewry, Shirran, Zhang, Shanahan, Morris: "Nesprin-1-alpha2 associates with kinesin at myotube outer nuclear membranes, but is restricted to neuromuscular junction nuclei in adult muscle." in: **Scientific reports**, Vol. 9, Issue 1, pp. 14202, (2019) (PubMed). Carpentier, Gao, Ewles, Morgan, Smith: "Vaccinia virus protein complex F12/E2 interacts with kinesin light chain isoform 2 to engage the kinesin-1 motor complex." in: **PLoS pathogens**, Vol.

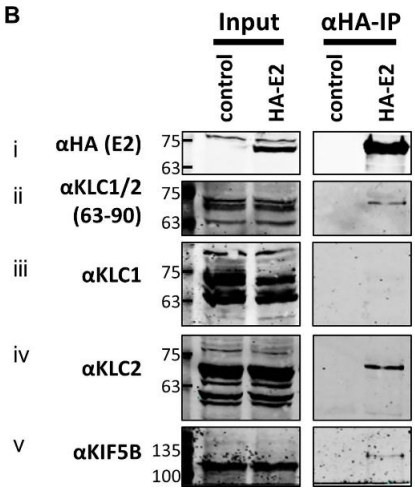
11, Issue 3, pp. e1004723, (2015) (PubMed).

Images



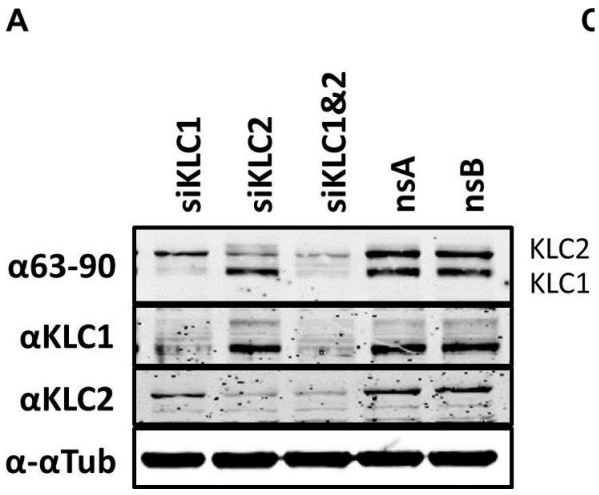
Western Blotting

Image 1. WB Image Sample (30 ug of whole cell lysate) A: A549 7.5% SDS PAGE antibody diluted at 1:1000



Western Blotting

Image 2. Endogenous KLC2 co-immunoprecipitates with E2.(A) SDS-PAGE and immunoblot analysis of α-HA-IP from HEK 293T cells infected with either vF12-HA or vB14-HA at 5 PFU/cell and harvested 14 hpi. Clarified cell lysates (Input) and α-HA immunoprecipitated samples were immunoblotted with the antibodies indicated on the left of the figure. (B) SDS-PAGE and immunoblot analysis of α-HA immunoprecipitation from lysates generated from HEK 293T cells transfected with a plasmid encoding HA-tagged E2 or a control plasmid as indicated. Samples were probed for the precipitated E2 protein (i) and for co-precipitation of KLC using the 63-90 antibody (ii). The co-precipitating KLC isoform identity was confirmed by immunoblotting with antibodies specific for KLC1 (iii) and KLC2 (iv). Co-precipitation of the entire kinesin-1 complex with E2 was confirmed by immunoblotting with the α-Kif5B antibody (v). - figure provided by CiteAb. Source: PMID31578382



Western Blotting

Image 3. The effect of KLC knock-down by siRNA on virus egress.(A) SDS-PAGE and immunoblotting analysis of the efficiency of siRNA knockdown of KLC1 and KLC2 in the human osteosarcoma cell line U-2 OS. Cells were treated with siRNA targeting KLC1 (siKLC1), or KLC2 (siKLC2) or a mix of both (siKLC1 & 2) and compared to cells treated with two independent non-targeting siRNAs (nsA and nsB). Cells were harvested 72 hpi and protein levels were analysed by SDS-PAGE. Tubulin levels were measured to confirm equivalent protein loading levels using an antibody specific to α-tubulin. Levels of KLC1 and KLC2 were measured by staining both with the pan-KLC 63-90 antibody, detecting both KLC1 (lower band) and KLC2 (upper band), and antibodies specific for KLC1 and KLC2. (B) Plaque size determination of vA5GFP on siRNA treated U-2 OS cells. Cells were treated with siRNA to KLC1, KLC2, KLC1&2 or two independent non-silencing RNAs (nsA and nsB). Monolayers of siRNA-treated cells were infected with vA5GFP to generate well separated plaques by 3 dpi. Cells were fixed and plaques positive for GFP expression were imaged using an inverted fluorescence microscope with a mounted digital camera and plaque surface area was measured using Axiovision (Zeiss) software. The average size of 20-35 plaques per sample and 3 replicate samples per condition were calculated and compared by student t-test (**** $p<0.0001$). (C) Estimation of virus egress from siRNA-treated cells by flow cytometry. Cells infected with vA5GFP at 5 PFU/cell and stained at various times pi prior to fixation for the CEV-associated B5 protein. Levels of staining were quantified by flow cytometry. (i) To validate this method of measuring egress an initial experiment compared three viruses known to display different levels of virion egress, vA5GFP (WT), vA5GFP-ΔA36 (vΔA36) and vA5GFP-ΔF12 (vΔF12). Background staining levels were

monitored by including a sample stained with an isotype control antibody (iso). The three viruses showed levels of surface staining similar to their known relative levels of virion egress. (ii) To measure the effect of siRNA treatment on egress, cells were treated with siRNAs for 48 h and then infected with vA5GFP and stained for surface B5 at the indicated times. (D) Single step growth curve of released and cell-associated virus from siRNA-treated cells. U-2 OS cells were treated with siRNA targeting either KLC1 or KLC2 or a non-silencing (ns) control RNA and infected with vA5GFP at 10 PFU/cell 48 h after siRNA treatment. The supernatant (i) and cells (ii) were harvested separately at 1 hpi and 16 hpi. The infectious virus titre of triplicate samples was determined by plaque assay and numbers were analysed by student's T-test. - figure provided by CiteAb. Source: PMID31578382