

Anti-KLC1 Antibody Picoband™ (monoclonal, 4F2D7)

Catalog # ABO16604

Product Information

Application	WB
Primary Accession	Q07866
Host	Mouse
Isotype	Mouse IgG2b
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-KLC1 Antibody Picoband™ (monoclonal, 4F2D7) . Tested in WB applications. This antibody reacts with Human, Mouse, Rat.
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Additional Information

Gene ID	3831
Other Names	Kinesin light chain 1, KLC 1, KLC1, KLC, KNS2
Calculated MW	65310
Application Details	Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat
Source	Eukaryota
Contents	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Clone Names	Clone: 4F2D7
Immunogen	E.coli-derived human KLC1 recombinant protein (Position: M1-D537).
Purification	Immunogen affinity purified.
Storage	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.

Protein Information

Name	KLC1
Synonyms	KLC, KNS2
Function	Kinesin is a microtubule-associated force-producing protein that may play a

role in organelle transport (PubMed:[21385839](#)). The light chain may function in coupling of cargo to the heavy chain or in the modulation of its ATPase activity (By similarity).

Cellular Location

Cell projection, growth cone {ECO:0000250|UniProtKB:P37285}. Cytoplasmic vesicle. Cytoplasm, cytoskeleton

Tissue Location

Found in a variety of tissues. Mostly abundant in brain and spine.

Background

Kinesin light chain 1 is a protein that in humans is encoded by the *KLC1* gene. Conventional kinesin is a tetrameric molecule composed of two heavy chains and two light chains, and transports various cargos along microtubules toward their plus ends. The heavy chains provide the motor activity, while the light chains bind to various cargos. This gene encodes a member of the kinesin light chain family. It associates with kinesin heavy chain through an N-terminal domain, and six tetratricopeptide repeat (TPR) motifs are thought to be involved in binding of cargos such as vesicles, mitochondria, and the Golgi complex. Thus, kinesin light chains function as adapter molecules and not motors per se. Although previously named "kinesin 2", this gene is not a member of the kinesin-2 / kinesin heavy chain subfamily of kinesin motor proteins. Extensive alternative splicing produces isoforms with different C-termini that are proposed to bind to different cargos; however, the full-length nature and/or biological validity of most of these variants have not been determined.

Images

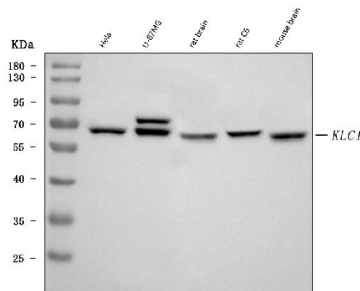


Figure 1. Western blot analysis of KLC1 using anti-KLC1 antibody (M04116-1).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human Hela whole cell lysates,

Lane 2: human U-87MG whole cell lysates,

Lane 3: rat brain tissue lysates,

Lane 4: rat C6 whole cell lysates,

Lane 5: mouse brain tissue lysates.

After electrophoresis, proteins were transferred to a

nitrocellulose membrane at 150 mA for 50-90 minutes.

Blocked the membrane with 5% non-fat milk/TBS for 1.5

hour at RT. The membrane was incubated with mouse

anti-KLC1 antigen affinity purified monoclonal antibody

(Catalog # M04116-1) at 0.5 µg/mL overnight at 4°C, then

washed with TBS-0.1%Tween 3 times with 5 minutes each

and probed with a goat anti-mouse IgG-HRP secondary

antibody at a dilution of 1:10000 for 1.5 hour at RT. The

signal is developed using an Enhanced Chemiluminescent

detection (ECL) kit (Catalog # EK1001) with Tanon 5200

system. A specific band was detected for KLC1 at

approximately 65 kDa. The expected band size for KLC1 is

at 65 kDa.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.