

**Anti-KLC1 Antibody Picoband™ (monoclonal, 4F2D7)**  
Catalog # ABO16604

**Specification**

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

Application	WB
Primary Accession	<a href="#">Q07866</a>
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.

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

**Gene ID** 3831

**Other Names**

Kinesin light chain 1, KLC 1, KLC1, KLC, KNS2

**Calculated MW**

65 kDa KDa

**Application Details**

Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat<br>

**Contents**

Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na<sub>2</sub>HPO<sub>4</sub>.

**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.**

**Anti-KLC1 Antibody Picoband™ (monoclonal, 4F2D7) - 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:<a href="http://www.uniprot.org/citations/21385839" target="\_blank">21385839</a>). 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.

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

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

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

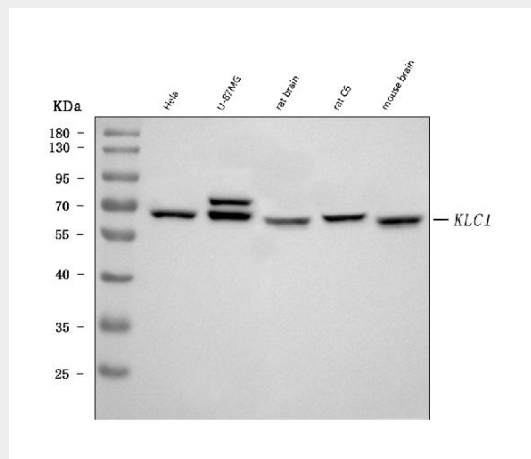


Figure 1. Western blot analysis of KLC1 using anti-KLC1 antibody (M04116-1).

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.

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