Product Name: **KD-Validated Kinesin Light Chain 1 Recombinant Rabbit Monoclonal Antibody**

Catalog #: **KVAb01780**

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC,IHC-P
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 65.3kDa

Antigen Information

Gene Name	KLC1
Alternative Names	KLC1; Kinesin Light Chain 1; KLC; KNS2A; KNS2; Kinesin 2 60/70kDa; HKLC1S; HKLC1N; HKLC1P; HKLC1G; HKLC1R; HKLC1J; HKLC1B; Medulloblastoma Antigen MU-MB-2.50; Kinesin 2; KLC
Gene ID	3831.0
SwissProt ID	Q07866
Immunogen	A synthesized peptide derived from human KLC1

Background

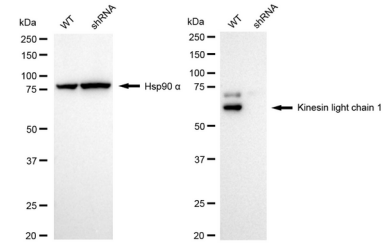
Conventional kinesin is a tetrameric molecule composed of two heavy chains and two light chains, and transports various

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. [provided by RefSeq, Jul 2008]

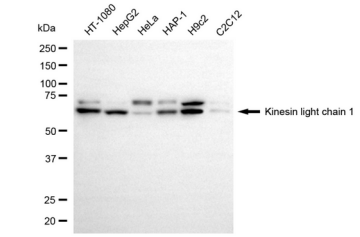
Research Area

Signal Transduction,Neuroscience

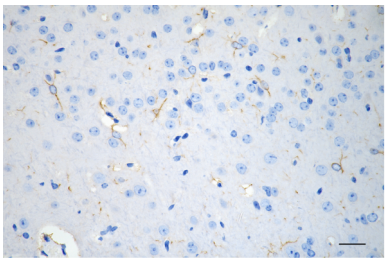
Image Data



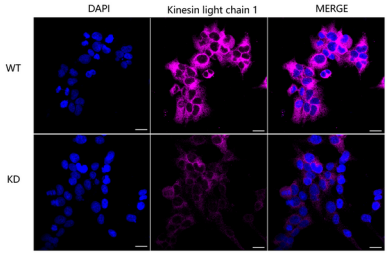
Western blotting analysis using kinesin light chain 1 antibody (KVAb01780). Kinesin light chain 1 expression in wild type (WT) and kinesin light chain 1 (KLC1) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with kinesin light chain 1 antibody (KVAb01780, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



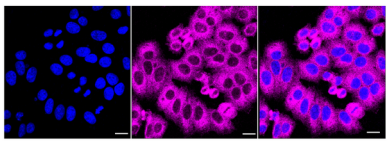
Western blotting analysis using kinesin light chain 1 antibody (KVAb01780). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with kinesin light chain 1 antibody (KVAb01780, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



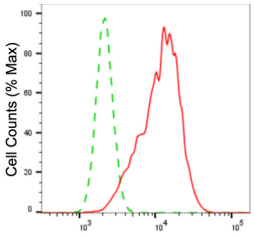
Immunohistochemistry was performed on paraffin-embedded mouse brain using kinesin light chain 1 antibody (KVAb01780, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.



Immunocytochemical staining of Hela cells using Kinesin light chain 1 antibody (KVAb01780, 1:1,000), Top panel: wild-type (WT); Bottom panal:Kinesin light chain 1 shRNA knockdown (KD). Nuclei were stained blue with DAPI;Kinesin light chain 1 was stained magenta with Alexa Fluor® 647. Scale bar, 20 µm. Permeabilization: Triton.



Immunocytochemical staining of HepG2 cells with kinesin light chain 1 antibody (KVAb01780, 1:1,000). Nuclei were stained blue with DAPI; Kinesin light chain 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.



Flow cytometric analysis of kinesin light chain 1 expression in HepG2 cells using kinesin light chain 1 antibody (KVAb01780, 1:2,000). Green, isotype control; red, kinesin light chain 1.