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#48633**KLC1 (D2T2R) Rabbit mAb**

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<b>Applications:</b> W, IP	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 65, 75	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q07866	<b>Entrez-Gene Id:</b> 3831
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<b>Product Usage Information</b>	<b>Application</b>	<b>Dilution</b>
	Western Blotting	1:1000
	Immunoprecipitation	1:200
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.	
<b>Specificity/Sensitivity</b>	KLC1 (D2T2R) Rabbit mAb recognizes endogenous levels of total KLC1 protein. This antibody also cross-reacts with an unidentified protein of 25 kDa.	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly443 of human KLC1 protein.	
<b>Background</b>	Kinesins are heterotetrameric motor proteins that transport cargo along microtubule tracks toward their plus ends (anterograde direction) in an ATP-dependent manner. Two heavy chains contain the motor activity, while two kinesin light chains act as adaptor proteins that may be required for binding of specific cargo and/or regulation of heavy chain catalytic activity. The amino terminus of kinesin light chain 1 (KLC1) binds to kinesin heavy chains while the KLC1 carboxy-terminal tetratricopeptide repeat (TPR) domain binds cargo (1-3). Phosphorylation of KLC1 at Ser521 by AMPK may regulate insulin granule dynamics (4,5). Research studies identify a KLC1-ALK fusion protein in human lung adenocarcinoma, and this finding may provide insight for future therapeutics (6).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Verhey, K.J. and Hammond, J.W. (2009) <i>Nat Rev Mol Cell Biol</i> 10, 765-77.</li> <li>2. Hirokawa, N. et al. (2009) <i>Nat Rev Mol Cell Biol</i> 10, 682-96.</li> <li>3. Kawano, T. et al. (2012) <i>Traffic</i> 13, 834-48.</li> <li>4. McDonald, A. et al. (2010) <i>Biochem Soc Trans</i> 38, 205-8.</li> <li>5. McDonald, A. et al. (2009) <i>Islets</i> 1, 198-209.</li> <li>6. Togashi, Y. et al. (2012) <i>PLoS One</i> 7, e31323.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.
<b>Applications Key</b>	<b>W:</b> Western Blotting <b>IP:</b> Immunoprecipitation
<b>Cross-Reactivity Key</b>	<b>H:</b> Human
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