#3672 Store at -20°C

Myosin Light Chain 2 Antibody

rev. 01/13/16

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications

<table>
<thead>
<tr>
<th>Species Cross-Reactivity*</th>
<th>Molecular Wt.</th>
<th>Source</th>
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<tbody>
<tr>
<td>W Endogenous</td>
<td>18 kDa</td>
<td>Rabbit**</td>
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</table>

**Background:** Myosin is composed of six polypeptide chains: two identical heavy chains and two pairs of light chains. Myosin light chain 2 (MLC2), also known as myosin regulatory light chain (MRLC or RLC, LC20), has many isoforms depending on its distribution. In smooth muscle, MLC2 is phosphorylated at Thr18 and Ser19 by myosin light chain kinase (MLCK) in a Ca2+/calmodulin-dependent manner (1). This phosphorylation is correlated with myosin ATPase activity and smooth muscle contraction (2). ROCK also phosphorylates Ser19 of smooth muscle MLC2, which regulates the assembly of stress fibers (3). Phosphorylation of smooth muscle MLC2 at Ser1/Ser2 and Ser9 by PKC and cdc2 has been reported to inhibit myosin ATPase activity (4,5). Phosphorylation by cdc2 controls the timing of cytokinesis (5). Transgenic mice lacking phosphorylation sites on the cardiac muscle isoform show morphological and functional abnormalities (6).

Specificity/Sensitivity: Myosin Light Chain 2 Antibody detects endogenous levels of total Myosin Light Chain 2 (smooth muscle). This antibody does not cross-react with the cardiac isoform of Myosin Light Chain 2, or Myosin Essential Light Chain.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino-terminal residues of human Myosin Light Chain 2 (smooth muscle isofrm). Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

Western blot analysis of extracts from HEK293, PL45, A431, C2C12 and C6 cells using Myosin Light Chain 2 Antibody.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at −20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:
Western Blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com. Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/ BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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