**Background**

Myosin, the major component of thick muscle filaments, is a long asymmetric molecule containing a globular head and a long tail. Activation of smooth and cardiac/ventricular muscle primarily involves pathways which increase calcium and myosin phosphorylation, resulting in contraction. Myosin in vertebrate striated muscle is composed of two heavy chains and four light chains. There are two distinct types of light chains: the phosphorylatable, regulatory or MLC2 type; and the nonphosphorylatable, alkali or MLC1 and MLC3 types. Myosin light chain phosphatase acts to regulate muscle contraction by dephosphorylating activated myosin light chain. The role of myosin alkali light chains in vertebrate skeletal muscle is poorly understood, although alkali light chains in smooth muscle may be involved with the active site of myosin. Several isoforms of myosin alkali light chains have been identified, encoded by a family of myosin light chain genes. Each is associated with different muscle types. MYL1 (Myosin light chain 1, skeletal muscle isoform), also known as MLC1F or MLC3F, is an hexameric ATPase cellular motor protein that is composed of two heavy chains, two nonphosphorylatable alkali light chains, and two phosphorylatable regulatory light chains. MYL1 is expressed in fast skeletal muscle and two isoforms exist due to alternative splicing.

**References**


**Chromosomal Location**

Genetic locus: MYL1 (human) mapping to 2q34; Myl1 (mouse) mapping to 1 C3.

**Source**

MYL1 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MYL1 of human origin.

**Product**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.01% sodium azide and 0.1% gelatin. Blocking peptide available for competition studies, sc-168680 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**Applications**

MYL1 (T-14) is recommended for detection of MYL1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:300).

MYL1 (T-14) is also recommended for detection of MYL1 in additional species, including equine, canine, bovine, porcine and avian.

**Recommended Secondary Reagents**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:200-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000). Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 and donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

**Storage**

Store at 4° C. **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**Research Use**

For research use only, not for use in diagnostic procedures.