Product Information

Anti-Tropomyosin (Sarcomeric) Antibody, Mouse Monoclonal

Clone CH1, Purified from Hybridoma Cell Culture

T9283

Product Description

Anti-Tropomyosin (Sarcomeric) Antibody, Mouse Monoclonal is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes of an immunized mouse. Purified chicken muscle tropomyosin was used as the immunogen.

Anti-Tropomyosin (Sarcomeric) Antibody, Mouse Monoclonal reacts with striated muscle forms of tropomyosin, including cardiac α−tropomyosin and skeletal α− and β−tropomyosin but not with tropomyosin isoforms from chicken gizzard (smooth muscle) or embryo fibroblasts (non-muscle isoforms). The antibody has been shown to interfere with the binding of cardiac tropomyosin to rabbit F-actin filaments and to cause the release of tropomyosin from F-actin filaments. Immunoblotting of native peptides (non-denatured) generated by the digestion of cardiac tropomyosin with the V8 protease and trypsin revealed a stronger reaction of the antibody with the Va than with the Vb fragmentation product and reaction against the 3 tryptic peptides Ta, Tb, and Tc. The antibody shows no reaction against the denatured protein in immunoblotting. In formalin-fixed, paraffin-embedded tissue sections the antibody reacts against striated muscle of human tongue, heart, and chicken heart. The shows no reaction with other elements from these tissues nor with human intestine or tonsil. The product is also reactive with the rat skeletal muscle myoblast cultured cell line L8.

Anti-Tropomyosin (Sarcomeric) Antibody, Mouse Monoclonal may be used for staining of cells grown in culture, where tropomyosin is distributed periodically along the length of the stress fibers and for immunohistochemical studies on tissue sections. Together with other monoclonal antibodies to tropomyosin (clones TM228 and TM311, Cat No. T4780 and T2780, respectively) Anti-Tropomyosin (Sarcomeric) Antibody, Mouse Monoclonal can be used to study intra-cellular localization, assembly and functions of the various tropomyosin isoforms. Tropomyosin is a rigid rod-shaped protein closely associated with the thin filaments of muscle cells and the microfilaments of non-muscle cells. In striated cells, tropomyosin together with the troponin complex plays a central role in regulating the Ca^{2+} dependent interaction between actin and myosin. Tropomyosin is a fairly conserved protein in eukaryotic cells, although it has been shown to exist in multiple forms (isoforms) that are specific to cells and tissues. Moreover, during myogenesis and cell transformation, tropomyosin isoforms with different molecular weights tend to decrease, increase or disappear.

Reagents

Supplied as a solution in 0.01 M PBS, pH 7.4, containing 15 mM sodium azide as a preservative.

Precautions and Disclaimer

Due to the Sodium azide content a material safety data sheet (SDS) for this product has been sent to the attention of the safety officer of your institution. Consult the SDS for information regarding hazards and safe handling practices.

Product Profile

The minimum antibody titer of 1:50 was determined by indirect immunoperoxidase staining of formalin-fixed, paraffin-embedded human tissue sections using the Mouse ExtrAvidin® Peroxidase Staining Kit (EXTRA-2). In order to obtain best results, it is recommended that each individual user determine their working dilution by titration assay. Storage For continuous use, store at 2-8 °C for up to one month. For extended storage, the solution may be frozen in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

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