

CLINICAL SPECIFICATIONS

TROPOMYOSIN

Function:

Tropomyosin is a cytoskeletal microfilamental protein that regulates actin mechanics. Tropomyosin plays an important role in muscle contraction. Tropomyosin, along with the troponin complex, works with actin in muscle fibers and manages muscle contraction by regulating the binding of myosin. Tropomyosin isoforms are involved in the stabilization of actin filaments, intracellular organelle movement, cell-shape maintenance and cytokinesis.

Antibodies Appear:

Autoimmune Cardiovascular Diseases⁴
 Colon Autoimmunity^{1, 2, 5}
 Ulcerative Colitis^{1, 2, 5}

Known Cross-Reactions: Group A Streptococcal M Proteins;³ Myosin;⁴ *Giardia lamblia*;⁶ Tilapia tropomyosin;⁷ *Bacillus cereus*, *Nostoc punctiforme*⁸

Clinical Significance:

The autoantibodies of Tropomyosin present in the sera of patients with Ulcerative Colitis have been shown to destroy Cr-labeled colonic adenocarcinoma cells (LS180) by antibody and complement mediated lysis.² Due to the high familial incidence of Ulcerative Colitis,¹ first degree relatives of patients diagnosed with Ulcerative Colitis, should be assessed for Tropomyosin antibodies.

References:

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