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M2 Human

Catalog #:ENPS-079

For research use only.

Description: Recombinant antigen for solid (ELISA) and fluid phase diagnostic assays. Mixture of E2/dihydrolipamide acyltransferase-subunits from 3 mitochondrial protein complexes: pyruvate dehydrogenase complex (PDC-E2) having a molecular mass of 60,630 Dalton (pI 5.8); 2-oxo-glutarate dehydrogenase complex (OGDC-E2) having a molecular mass of 42,301 Dalton (pI 6.3); branched chain 2-oxo-acid dehydrogenase complex (BCOADCE2) having a molecular mass of 47,321 Dalton (pI 6.5). Mixture contains equal mass of each protein component. cDNAs coding for the mature forms of the human PDC-E2, OGDC-E2 and BCOADC-E2 proteins individually fused to a hexa-histidine purification tag.

Source: Sf9 insect cells.

Purity: Greater than 75% as determined by SDS-PAGE.

Formulation:

M2 is supplied in 16mM HEPES buffer pH-8.0, 400mM NaCl, and 20% glycerol.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drµgs, agricultural or pesticidal products, food additives or household chemicals.

Applications:

Western blot with anti-M2-Antigen autoantibody-positive patient sera or monoclonal anti-hexa-His-tag antibody.

Introduction:

M2 autoantigen is a key mark of antimitochondrial autoantibodies (AMA), a typical serological feature in patients suffering from primary biliary cirrhosis (PBC) which is a serious autoimmune liver disease accompanied by damage to intrahepatic bile ducts. Molecular definition of the M2 antigen has displayed it as no less than 3 separate target proteins. The M2 role is like the so-called E2 subunits (or dihydrolipoamide transferases) of different mitochondrial dehydrogenase complexes: *pyruvate dehydrogenase complex. *branched chain 2-oxo-acid dehydrogenase complex. *2-oxoglutarate dehydrogenase complex. Biochemically, these complexes catalyze the oxidative decarboxylation of various alpha-keto-acid substrates and systematically engage with a prosthetic lipoamide group; they are situated in the mitochondrial matrix in association with the inner membrane. The most well-known reactivity of AMA positive PBC sera is against PDC-E2. Some patients have AMA which reacts with PDC-E2 alone (95%), but most patients also show reactivity against OGDC-E2 (39-88%) and/or BCOADC-E2 (53-55%). Actually, patients can be found with reactivity only against OGDC-E2 and/or BCOADC-E2 and no PDC-E2 autoantibodies. These patients will be overlooked in assays based on natural source-derived, predominantly PDC-E2-containing M2 antigen preparations.

Storage:

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. Avoid multiple freeze-thaw cycles.

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