#12362 Store at -20°C

DLAT (4A4-B6-C10) Mouse mAb

100 μl (10 western blots)

rev. 01/05/15

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

| Annlications | Snecies Cross-Reactivity* | Molecular Wt | Isotyne | |
|--------------|---------------------------|--------------|--------------|--|
| W, IP, IF-IC | H, Mk | 69 kDa | Mouse lgG1** | |
| Endogenous | | | °, | |

Background: Dihydrolipoamide acetyltransferase (DLAT) transfers an acetyl group from pyruvate to CoA to synthesize acetyl-CoA (1-4). This protein, also known as the E2 subunit of the pyruvate dehydrogenase complex (PDC-E2), has been implicated in the literature as the primary autoantigen in primary biliary cirrhosis (2-5). Antimitochondrial antibodies (AMAs) are likely formed when DLAT is exposed to the immune system in apoptotic cells of the bile duct (3,5). Research studies have shown that in some cases, cosmetics, NSAIDs, chewing gum, acetaminophen, and other compounds could trigger exposure of DLAT in sensitive individuals (3). The presence of AMAs is often detectable before disease diagnosis (4,5). Research studies have also shown that activation of the Toll-like receptor-3 (TLR-3) pathway is involved in the progression from a subclinical to clinical state (4).

Specificity/Sensitivity: DLAT (4A4-B6-C10) Mouse mAb recognizes endogenous levels of total DLAT protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a recombinant human DLAT protein.



Confocal immunofluorescent analysis of HeLa cells using DLAT (4A4-B6-C10) Mouse mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudocolor = DRAQ5[®] #4084 (fluorescent DNA dye).



Western blot analysis of extracts from various cell lines using DLAT (4A4-B6-C10) Mouse mAb.

2 3

kDa

200

140



Immunoprecipitation of DLAT from HeLa cell extracts using Mouse (G3A1) mAb IgG1 Isotype Control #5415 (lane 2) or DLAT (4A4-B6-C10) Mouse mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using DLAT (4A4-B6-C10) Mouse mAb.



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Entrez-Gene ID #1737 UniProt ID #P10515

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. *Do not aliquot the antibody.*

*Species cross-reactivity is determined by western blot.

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

| Recommended Antibody Dilutions: | |
|---------------------------------|--|
| Western blotting | |
| Immunonrecipitation | |

| western brotting | 1.1000 |
|----------------------------|--------|
| Immunoprecipitation | 1:50 |
| Immunofluorescence (IF-IC) | 1:100 |
| | |

1.1000

For product specific protocols please see the web page for this product at www.cellsignal.com.

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Background References:

(1) Thekkumkara, T.J. et al. (1988) FEBS Lett 240, 45-8.

- (2) Coppel, R.L. et al. (1988) *Proc Natl Acad Sci U S A* 85, 7317-21.
- (3) Naiyanetr, P. et al. (2011) J Autoimmun 37, 209-16.
- (4) Ambrosini, Y.M. et al. (2011) *Clin Exp Immunol* 166, 110-20.
- (5) Lleo, A. et al. (2009) Hepatology 49, 871-9.