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MLXIPL Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1877a

Product Information

Application	WB, ICC, E
Primary Accession	Q9NP71
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5D12D1
Isotype	IgG1
Calculated MW	93073
Description	This gene encodes a basic helix-loop-helix leucine zipper transcription factor of the Myc/Max/Mad superfamily. This protein forms a heterodimeric complex and binds and activates, in a glucose-dependent manner, carbohydrate response element (ChoRE) motifs in the promoters of triglyceride synthesis genes. The gene is deleted in Williams-Beuren syndrome, a multisystem developmental disorder caused by the deletion of contiguous genes at chromosome 7q11.23.
Immunogen	Purified recombinant fragment of human MLXIPL (AA: 18-143) expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	51085
Other Names	Carbohydrate-responsive element-binding protein, ChREBP, Class D basic helix-loop-helix protein 14, bHLHd14, MLX interactor, MLX-interacting protein-like, WS basic-helix-loop-helix leucine zipper protein, WS-bHLH, Williams-Beuren syndrome chromosomal region 14 protein, MLXIPL, BHLHD14, MIO, WBSCR14
Dilution	WB~~1/500 - 1/2000 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MLXIPL Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MLXIPL
Synonyms	BHLHD14, MIO, WBSCR14
Function	Binds DNA as a heterodimer with MLX/TCFL4 and activates transcription. Binds to the canonical E box sequence 5'-CACGTG-3'. Plays a role in transcriptional activation of glycolytic target genes. Involved in glucose-responsive gene regulation (By similarity). Regulates transcription in response to changes in cellular carbohydrate abundance such as occurs during fasting to feeding metabolic transition. Refeeding stimulates MLXIPL/ChREBP transcription factor, leading to increased BCKDK to PPM1K expression ratio, phosphorylation and activation of ACLY that ultimately results in the generation of malonyl-CoA and oxaloacetate immediate substrates of de novo lipogenesis and gluconeogenesis, respectively (By similarity).
Cellular Location	Nucleus.
Tissue Location	Expressed in liver, heart, kidney, cerebellum and intestinal tissues

Background

This gene encodes a common acute lymphocytic leukemia antigen that is an important cell surface marker in the diagnosis of human acute lymphocytic leukemia (ALL). This protein is present on leukemic cells of pre-B phenotype, which represent 85% of cases of ALL. This protein is not restricted to leukemic cells, however, and is found on a variety of normal tissues. It is a glycoprotein that is particularly abundant in kidney, where it is present on the brush border of proximal tubules and on glomerular epithelium. The protein is a neutral endopeptidase that cleaves peptides at the amino side of hydrophobic residues and inactivates several peptide hormones including glucagon, enkephalins, substance P, neurotensin, oxytocin, and bradykinin. This gene, which encodes a 100-kD type II transmembrane glycoprotein, exists in a single copy of greater than 45 kb. The 5' untranslated region of this gene is alternatively spliced, resulting in four separate mRNA transcripts. The coding region is not affected by alternative splicing. ;

References

1. Diabetes. 2012 Mar;61(3):574-85. 2. Biochim Biophys Acta. 2011 Dec;1811(12):1194-200.

Images

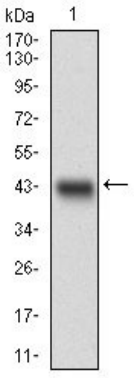
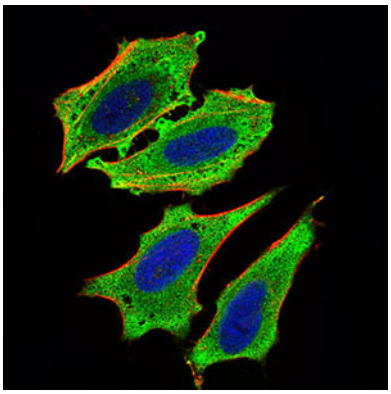


Figure 1: Western blot analysis using MLXIPL mAb against human MLXIPL recombinant protein. (Expected MW is 41 kDa)

Figure 2: Western blot analysis using MLXIPL mAb against HEK293 (1) and MLXIPL (AA: 18-143)-hIgGFc transfected HEK293 (2) cell lysate.



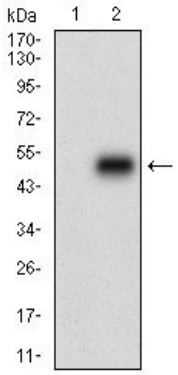


Figure 3: Immunofluorescence analysis of Hela cells using MLXIPL mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.