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WBSCR14 Rabbit pAb

Catalog # AP99588

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9NP71
Other Accession	Q9NP71
Reactivity	Rat
Predicted	Pig, Human, Mouse, Chicken, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	93073
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human WBSCR14/ChREBP
Epitope Specificity	81-180/852
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 basic helix-loop-helix (bHLH) domain.
SUBUNIT	Binds DNA as a heterodimer with TCFL4/MLX.
Post-translational modifications	Phosphorylation at Ser-556 by AMPK inactivates the DNA-binding activity (By similarity).
DISEASE	Note=WBSCR14 is located in the Williams-Beuren syndrome (WBS) critical region. WBS results from a hemizygous deletion of several genes on chromosome 7q11.23, thought to arise as a consequence of unequal crossing over between highly homologous low-copy repeat sequences flanking the deleted region. Haploinsufficiency of WBSCR14 may be the cause of certain cardiovascular and musculo-skeletal abnormalities observed in the disease.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	ChREBP (Carbohydrate responsive element binding protein) is a transcription factor playing a critical role in the nutrient and hormonal regulation of genes encoding enzymes of glucose metabolism and lipogenesis pathways. It contains several domains including a nuclear localization signal (NLS) near the N-terminus, polyproline domains, a basic helix-loop-helix leucine zipper (b/HLH/Zip) and a leucine zipper like (zip-like) domain. ChREBP is ubiquitously detected in various tissues, with highest expression in liver, kidney and white and brown adipose tissue. Under basal conditions ChREBP is localized in the cytosol, translocating into the nucleus upon high glucose stimulation following its dephosphorylation of phospho-serine 196.

Additional Information

Gene ID	51085
Other Names	CHREBP; MIO; MLX; MONDOB; WBSCR14; WS-bHLH; bHLHd14;

	MLXPL_HUMAN; MLXIPL; 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; MLX interacting protein like; Williams Beuren syndrome chromosome region 14; MLX interacting protein-like; carbohydrate response element binding protein
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	MLXIPL
Function	Glucose-responsive transcription activator that regulates fatty acid synthesis and glycolysis. Key determinant of systemic insulin sensitivity and glucose homeostasis. Important for the expression of fatty acid synthetic enzymes, including PC/Pcx, APOC4/Acl, ACACA/Acc1 and FASN/Fas (By similarity). Important for glucose-induced expression of L-type pyruvate kinase/PKLR (By similarity). Binds to the canonical and non-canonical E box DNA sequences 5'-CACGTG-3' and 5'-CACGCG-3' (By similarity). May also act as a transcriptional repressor (By similarity).
Cellular Location	Cytoplasm {ECO:0000250|UniProtKB:Q8VIP2}. Nucleus {ECO:0000250|UniProtKB:Q8VIP2}. Note=Localizes mainly in the cytoplasm of hepatocytes under low glucose and migrates into the nucleus under high glucose. {ECO:0000250|UniProtKB:Q8VIP2}
Tissue Location	Widely expressed with high levels in heart, brain, placenta, skeletal muscle and pancreas. Also expressed in fetal kidney, lung, liver and brain (PubMed:9860302). Expressed in fetal and adult liver (PubMed:10780788). Expressed in the cerebral cortex, including in the frontal, temporal, parietal and occipital lobes, and the cerebellum. Also detected in the intestine, including jejunum, ileum and colon (PubMed:11230181).

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