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BHLHE40 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10647a

Product Information

Application	WB, E
Primary Accession	O14503
Other Accession	O35780, O35185, Q5EA15, NP_003661.1
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Rat, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB28435
Calculated MW	45510
Antigen Region	22-51

Additional Information

Gene ID	8553
Other Names	Class E basic helix-loop-helix protein 40, bHLHe40, Class B basic helix-loop-helix protein 2, bHLHb2, Differentially expressed in chondrocytes protein 1, DEC1, Enhancer-of-split and hairy-related protein 2, SHARP-2, Stimulated by retinoic acid gene 13 protein, BHLHE40, BHLHB2, DEC1, SHARP2, STRA13
Target/Specificity	This BHLHE40 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 22-51 amino acids from the N-terminal region of human BHLHE40.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	BHLHE40 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BHLHE40

Function	Transcriptional repressor involved in the regulation of the circadian rhythm by negatively regulating the activity of the clock genes and clock-controlled genes (PubMed:12397359, PubMed:18411297). Acts as the negative limb of a novel autoregulatory feedback loop (DEC loop) which differs from the one formed by the PER and CRY transcriptional repressors (PER/CRY loop) (PubMed:14672706). Both these loops are interlocked as it represses the expression of PER1/2 and in turn is repressed by PER1/2 and CRY1/2 (PubMed:15193144). Represses the activity of the circadian transcriptional activator: CLOCK-BMAL1|BMAL2 heterodimer by competing for the binding to E-box elements (5'-CACGTG- 3') found within the promoters of its target genes (PubMed:15560782). Negatively regulates its own expression and the expression of DBP and BHLHE41/DEC2 (PubMed:14672706). Acts as a corepressor of RXR and the RXR-LXR heterodimers and represses the ligand-induced RXRA and NR1H3/LXRA transactivation activity (PubMed:19786558). May be involved in the regulation of chondrocyte differentiation via the cAMP pathway (PubMed:19786558). Represses the transcription of NR0B2 and attenuates the transactivation of NR0B2 by the CLOCK-BMAL1 complex (PubMed:28797635). Drives the circadian rhythm of blood pressure through transcriptional repression of ATP1B1 in the cardiovascular system (PubMed:30012868).
Cellular Location	Cytoplasm. Nucleus. Note=Predominantly localized in the nucleus (PubMed:11278694).
Tissue Location	Expressed in cartilage, spleen, intestine, lung, and to a lesser extent in heart, brain, liver, muscle and stomach

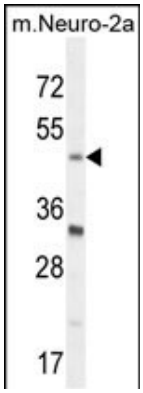
Background

BHLHE40 encodes a basic helix-loop-helix protein expressed in various tissues. Expression in the chondrocytes is responsive to the addition of Bt2cAMP. The encoded protein is believed to be involved in the control of cell differentiation.

References

Wang, W., et al. Biochem. Biophys. Res. Commun. 401(3):422-428(2010)
Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Soria, V., et al. Neuropsychopharmacology 35(6):1279-1289(2010)
Utge, S.J., et al. PLoS ONE 5 (2), E9259 (2010) :
Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)

Images



BHLHE40 Antibody (N-term) (Cat. #AP10647a) western blot analysis in mouse Neuro-2a cell line lysates (35ug/lane).This demonstrates the BHLHE40 antibody detected the BHLHE40 protein (arrow).

Citations

- Decreased carboxylesterases expression and hydrolytic activity in type 2 diabetic mice through Akt/mTOR/HIF-1α/Stra13 pathway.
- Interleukin-6 Induces DEC1, Promotes DEC1 Interaction with RXRα and Suppresses the Expression of PXR, CAR and Their Target Genes.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.