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BHLH3 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5748a

Product Information

Application	FC, IF, WB, E
Primary Accession	Q9C0J9
Other Accession	NP_110389
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	50498
Antigen Region	17-46

Additional Information

Gene ID	79365
Other Names	Class E basic helix-loop-helix protein 41, bHLHe41, Class B basic helix-loop-helix protein 3, bHLHb3, Differentially expressed in chondrocytes protein 2, hDEC2, Enhancer-of-split and hairy-related protein 1, SHARP-1, BHLHE41, BHLHB3, DEC2, SHARP1
Target/Specificity	This BHLH3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 17-46 amino acids from the N-terminal region of human BHLH3.
Dilution	FC~~1:10~50 IF~~1:10~50 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	BHLH3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BHLHE41 (HGNC:16617)

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:11278948, PubMed:14672706, PubMed:15193144, PubMed:15560782, PubMed:18411297, PubMed:19786558, PubMed:25083013). 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). Both these loops are interlocked as it represses the expression of PER1 and in turn is repressed by PER1/2 and CRY1/2. Represses the activity of the circadian transcriptional activator: CLOCK-BMAL1 heterodimer by competing for the binding to E-box elements (5'-CACGTG-3') found within the promoters of its target genes (PubMed:25083013). Negatively regulates its own expression and the expression of DBP and BHLHE41/DEC2. Acts as a corepressor of RXR and the RXR-LXR heterodimers and represses the ligand-induced RXRA/B/G, NR1H3/LXRA, NR1H4 and VDR transactivation activity. Inhibits HNF1A-mediated transactivation of CYP1A2, CYP2E1 AND CYP3A11 (By similarity).
Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00380, ECO:0000255|PROSITE-ProRule:PRU00981}
Tissue Location	Highly expressed in skeletal muscle and brain, moderately expressed in pancreas and heart, weakly expressed in placenta, lung, liver and kidney

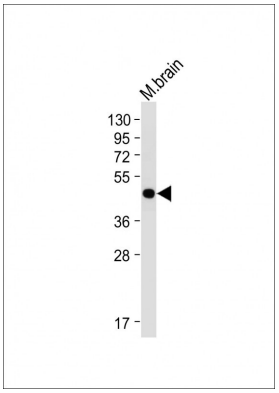
Background

BHLHE41 may be a transcriptional repressor that represses both basal and activated transcription.

References

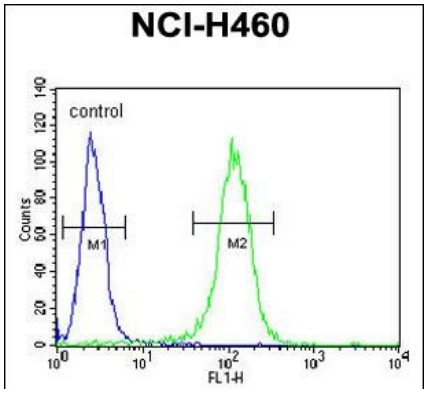
Honma, S., et al. Nature 419(6909):841-844(2002) Garriga-Canut, M., et al. J. Biol. Chem. 276(18):14821-14828(2001) Fujimoto, K., et al. Biochem. Biophys. Res. Commun. 280(1):164-171(2001) Grottke, C., et al. Int. J. Cancer 88(4):535-546(2000)

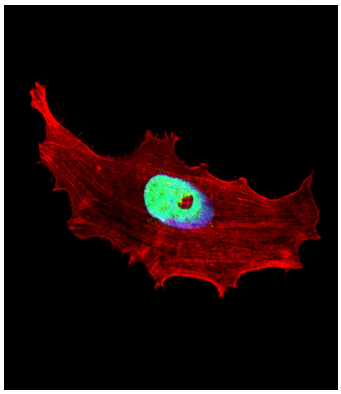
Images



Anti-BHLH3 Antibody (N-term) at 1:2000 dilution + Mouse brain lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 50 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

BHLH3 Antibody (N-term) (Cat. #AP5748a) flow cytometric analysis of NCI-H460 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.





Fluorescent confocal image of MCF-7 cell stained with BHLH3 Antibody (N-term)(Cat#AP5748a). MCF-7 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with BHLH3 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min).BHLH3 immunoreactivity is localized to nucleus significantly.

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