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SHARP2 Rabbit pAb

Catalog # AP99773

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	O14503
Other Accession	O14503
Predicted	Rat, Pig, Human, Mouse, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	45510
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SHARP2
Epitope Specificity	101-200/412
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 bHLH (basic helix-loop-helix) domain; Contains 1 Orange domain.
SUBUNIT	Homodimer. Heterodimer with BHLHE41/DEC2. Interacts with TCF3/E47. Interacts with ubiquitin-conjugating enzyme UBE2I/UBC9. Interacts with HDAC1, SUMO1, RXRA and ARNTL/BMAL1.
Post-translational modifications	Ubiquitinated; which may lead to proteasomal degradation. Sumoylation inhibits its ubiquitination and promotes its negative regulation of the CLOCK-ARNTL/BMAL1 heterodimer transcriptional activator activity.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a basic helix-loop-helix protein expressed in various tissues. The encoded protein can interact with ARNTL or compete for E-box binding sites in the promoter of PER1 and repress CLOCK/ARNTL's transactivation of PER1. This gene is believed to be involved in the control of circadian rhythm and cell differentiation. [provided by RefSeq, Feb 2014]

Additional Information

Gene ID	8553
Other Names	BHLHB2; Clast5; DEC1; HLHB2; SHARP-2; SHARP2; STRA13; Stra14; C130042M06Rik; CR8; wu:fc28a06; wu:fm54h07; zgc:76913; BHE40_BOVIN; BHLHE40; Class B basic helix-loop-helix protein 2 (bHLHb2); BHE40_HUMAN; Differentially expressed in chondrocytes protein 1 (DEC1); Enhancer-of-split and hairy-related protein 2 (SHARP-2); Stimulated by retinoic acid gene 13 protein; BHE40_MOUSE; E47 interaction protein 1 (EIP1); BHE40_RAT; basic helix-loop-helix family member e40; basic helix-loop-helix domain containing, class B, 2; basic helix-loop-helix family, member e40; differentially expressed in chondrocytes 1; differentiated embryo chondrocyte expressed gene 1
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:500

	0-10000
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	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

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