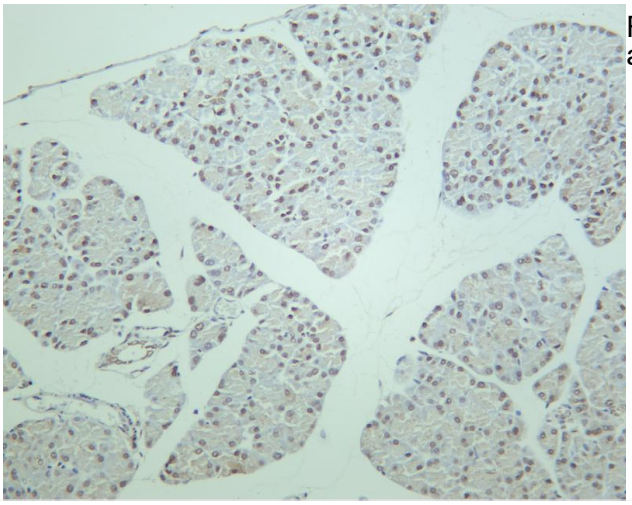
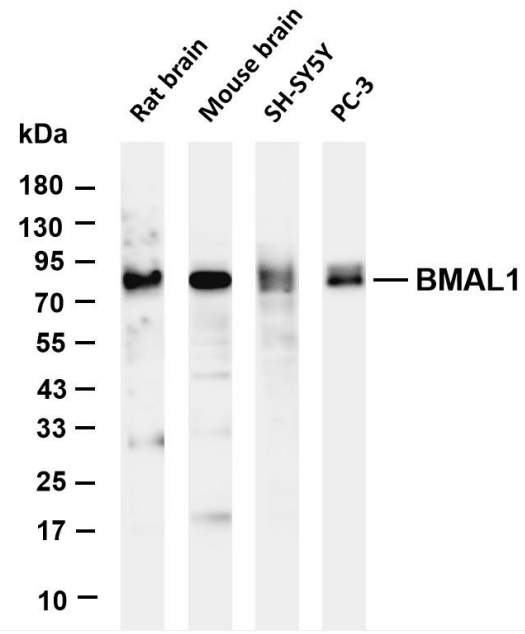
BMAL1 Rabbit mAb

Catalog No	YP-rAb-17595
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,IP,ELISA
Gene Name	ARNTL
Protein Name	Aryl hydrocarbon receptor nuclear translocator-like protein 1
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:200-1:1000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	ARNTL ; BHLHE5 ; BMAL1 ; MOP3 ; PASD3 ; Aryl hydrocarbon receptor nuclear translocator-like protein 1 ; Basic-helix-loop-helix-PAS protein MOP3 ; Brain and muscle ARNT-like 1Class E basic helix-loop-helix protein 5 ; bHLHe5 ; Member of PAS protein 3 ; PAS domain-containing protein 3 ; bHLH-PAS protein JAP3
Observed Band	78kD
Calculated Molecular Weight	69kD
Cell Pathway	Nucleus
Tissue Specificity	Hair follicles (at protein level). Highly expressed in the adult brain, skeletal muscle and heart.
Function	Alternative products:Additional isoforms seem to exist,Function:ARNTL-CLOCK heterodimers activate E-box element (3'-CACGTG-5') transcription of a number of proteins of the circadian clock. This transcription is inhibited in a feedback loop by PER, and also by CRY proteins.,miscellaneous:CLOCK-ARNTL double mutations within the PAS domains result in syngernistic desensitization to high levels of CRY on repression of CLOCK-ARNTL transcriptional activity of PER1 and, disrupt circadian rhythmicity.,PTM:Acetylated on Lys-538 upon dimerization with CLOCK. Acetylation facilitates CRY1-mediated repression.,PTM:Phosphorylated upon dimerization with CLOCK.,PTM:Sumoylated on Lys-259 upon dimerization with

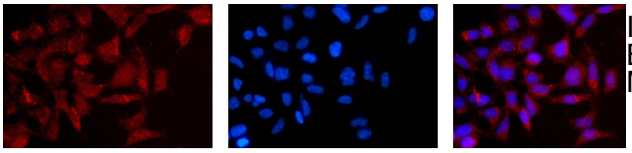
	CLOCK.,similarity:Contains 1 basic helix-loop-helix (bHLH) domain.,similarity:Contains 1 PAC (PAS-associated C-terminal) domain.,similarity:Contains 2 PAS (PER-ARNT-SIM) domains.,subunit:Component of the circadian clock oscillator which includes the CRY proteins, CLOCK or NPAS2, ARNTL or ARNTL2, CSNK1D and/or CSNK1E, TIMELESS and the PER proteins. Efficient DNA binding requires dimerization with another bHLH protein. Heterodimerization with CLOCK is required for E-box-dependent transactivation, for CLOCK nuclear translocation and degradation, and, for phosphorylation of both CLOCK and ARNTL. Interaction with PER and CRY proteins requires translocation to the nucleus. Interaction of the CLOCK-ARNTL heterodimer with PER or CRY inhibits transcription activation. Interacts with HSP90; with AHR in vitro, but not in vivo.,tissue specificity:Highly expressed in the adult brain, skeletal muscle and heart.,
Background	The protein encoded by this gene is a basic helix-loop-helix protein that forms a heterodimer with CLOCK. This heterodimer binds E-box enhancer elements upstream of Period (PER1, PER2, PER3) and Cryptochrome (CRY1, CRY2) genes and activates transcription of these genes. PER and CRY proteins heterodimerize and repress their own transcription by interacting in a feedback loop with CLOCK/ARNTL complexes. Defects in this gene have been linked to infertility, problems with gluconeogenesis and lipogenesis, and altered sleep patterns. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2014],
matters needing attention	Avoid repeated freezing and thawing!
Usage suggestions	This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



Rat pancreas was stained with anti-BMAL1 rabbit antibody



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-BMAL1 antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: Rat brain Lane 2: Mouse brain Lane 3: SH-SY5Y Lane 4: PC-3 Predicted band size: 69kDa Observed band size: 78kDa



Immunofluorescence analysis of HEK293. Picture A: BMAL1 antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B