

ARG64841 anti-ARNTL / BMAL1 antibody

Package: 100 μg Store at: -20°C

Summary

Product Description	Goat Polyclonal antibody recognizes ARNTL / BMAL1
Tested Reactivity	Hu
Predict Reactivity	Ms, Rat, Cow, Dog, Pig
Tested Application	WB
Specificity	This antibody is expected to recognize both reported isoforms (NP_001025444.1; NP_001025443.1). Reported variants represent identical protein (NP_001025443.1; NP_001169.3).
Host	Goat
Clonality	Polyclonal
Isotype	IgG
Target Name	ARNTL / BMAL1
Species	Human
Immunogen	REKITTNCYKFKIKD
Conjugation	Un-conjugated
Alternate Names	BMAL1; Basic-helix-loop-helix-PAS protein MOP3; Brain and muscle ARNT-like 1; bHLH-PAS protein JAP3; PAS domain-containing protein 3; Aryl hydrocarbon receptor nuclear translocator-like protein 1; MOP3; JAP3; Class E basic helix-loop-helix protein 5; bHLHe5; Member of PAS protein 3; PASD3; BMAL1c; TIC

Application Instructions

Application table	Application	Dilution
	WB	0.3 - 1 μg/ml
Application Note	WB: Recommend incubate at RT for 1h. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties

Form	Liquid
Purification	Purified from goat serum by antigen affinity chromatography.
Buffer	Tris saline (pH 7.3), 0.02% Sodium azide and 0.5% BSA.
Preservative	0.02% Sodium azide
Stabilizer	0.5% BSA
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot

and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note

For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 406 Human	
	Swiss-port # 000327 Human	
Background	The protein encoded by this gene is a basic helix-loop-helix protein that forms a heterodimer with CLOCK. This complex binds an E-box upstream of the PER1 gene, activating this gene and possibly other circadian rhythym-associated genes. Three transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]	
Research Area	Cell Biology and Cellular Response antibody; Gene Regulation antibody; Metabolism antibody; Neuroscience antibody	
Calculated Mw	69 kDa	
ΡΤΜ	Ubiquitinated, leading to its proteasomal degradation. O-glycosylated; contains O-GlcNAc. O-glycosylation by OGT prevents protein degradation by inhibiting ubiquitination. It also stabilizes the CLOCK-ARNTL/BMAL1 heterodimer thereby increasing CLOCK- ARNTL/BMAL1-mediated transcription of genes in the negative loop of the circadian clock such as PER1/2/3 and CRY1/2. Acetylated on Lys-538 upon dimerization with CLOCK. Acetylation facilitates CRY1-mediated repression. Deacetylated by SIRT1, which may result in decreased protein stability. Phosphorylated upon dimerization with CLOCK. Phosphorylation enhances the transcriptional activity, alters the subcellular localization and decreases the stability of the CLOCK-ARNTL/BMAL1 heterodimer by promoting its degradation. Phosphorylation shows circadian variations in the liver with a peak between CT10 to CT14. Phosphorylation at Ser-90 by CK2 is essential for its nuclear localization, its interaction with CLOCK and controls CLOCK nuclear entry (By similarity). Dephosphorylation at Ser-78 is important for dimerization with CLOCK and transcriptional activity (PubMed:23229515). Sumoylated on Lys-259 upon dimerization with CLOCK. Predominantly conjugated to poly-SUMO2/3 rather than SUMO1 and the level of these conjugates undergo rhythmic variation, peaking at CT9-CT12. Sumoylation localizes it exclusively to the PML body and promotes its ubiquitination in the PML body, ubiquitin-dependent proteasomal degradation and the transcriptional activity of the CLOCK- ARNTL/BMAL1 heterodimer.	

Images

250kDa 150kDa	ARG64841 anti-ARNTL / BMAL1 antibody WB image
100kDa 75kDa	Western blot: Human Brain (Cerebellum) lysate (35 µg protein in
50kDa	at 0.3 μ g/ml dilution.
37kDa	
25kDa	
20kDa	
15kDa	