

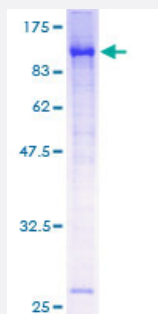
Full-Length

# ARNTL (Human) Recombinant Protein (P01)

Catalog # H00000406-P01

Size 25 ug, 10 ug

## Applications



## Specification

### Product Description

Human ARNTL full-length ORF ( AAH41129, 1 a.a. - 625 a.a.) recombinant protein with GST-tag at N-terminal.

### Sequence

MADQRMDISSTISDFMSPGPTDLLSSSLGTSGVDCNRKRKGSSTDYQESMDTDKDDPHGRLEYT  
EHQGRKNAREAHSQIEKRRRDKMNSFIDELASLVPTCNAMSRKLDKLTVLRMAVQHMKTLRGAT  
NPYTEANYKPTFLSDDDELKHLILRAADGFLFVVGCDRGKILFVSESVFKILNYSQNDLIGQSLFDYLH  
PKDIAKVKEQLSSSDTAPRERLIDAKTGLPVKTDITPGPSRLCSGARRSFFCRMKCNRPVSKVED  
KDFPSTCSKKKDRKSFCTIHSTGYLKS WPPTKMGLDEDNEPDNEGCLNSCLVAIGRLHSHVVPQ  
PVNGEIRVKSMEYVSRHAIDGKFVFVDQRATAILAYLPQELLGTSCYEYFHQDDIGHLAECHRQVL  
QTREKITTNCYFKIKDGSFITLSRWFSFMNPWTKEVEYVSTNTTVLANVLEGGDPTFPQLTASP  
HSMDSMLPSGEGGPKRTHPTVPGIPGGTRAGAGKIGRMIAEEIMEIHRIRGSSPSSCGSSPLNITST  
PPPDASSPGGKKILNGGTPDIPSSGLLSGQAQENPGYPYSDSSSILGENPHIGIDMIDNDQGSSSP  
SNDEAAMAVIMSLLEADAGLGGPVDFSDLPWPL

### Host

Wheat Germ (in vitro)

### Theoretical MW (kDa)

94.49

### Interspecies Antigen Sequence

Mouse (98); Rat (98)

### Preparation Method

[in vitro wheat germ expression system](#)

### Purification

Glutathione Sepharose 4 Fast Flow

|                         |                                                                          |
|-------------------------|--------------------------------------------------------------------------|
| Quality Control Testing | 12.5% SDS-PAGE Stained with Coomassie Blue.                              |
| Storage Buffer          | 50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer. |
| Storage Instruction     | Store at -80°C. Aliquot to avoid repeated freezing and thawing.          |
| Note                    | Best use within three months from the date of receipt of this protein.   |

## Applications

- Enzyme-linked Immunoabsorbent Assay
- Western Blot (Recombinant protein)
- Antibody Production
- Protein Array

## Gene Info — ARNTL

|                     |                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Entrez GeneID       | <a href="#">406</a>                                                                                                                                                                                                                                                                                                                                       |
| GeneBank Accession# | <a href="#">BC041129</a>                                                                                                                                                                                                                                                                                                                                  |
| Protein Accession#  | <a href="#">AAH41129</a>                                                                                                                                                                                                                                                                                                                                  |
| Gene Name           | ARNTL                                                                                                                                                                                                                                                                                                                                                     |
| Gene Alias          | BMAL1, BMAL1c, JAP3, MGC47515, MOP3, PASD3, TIC, bHLHe5                                                                                                                                                                                                                                                                                                   |
| Gene Description    | aryl hydrocarbon receptor nuclear translocator-like                                                                                                                                                                                                                                                                                                       |
| Omim ID             | <a href="#">602550</a>                                                                                                                                                                                                                                                                                                                                    |
| Gene Ontology       | <a href="#">Hyperlink</a>                                                                                                                                                                                                                                                                                                                                 |
| Gene Summary        | 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 rhythm-associated genes. Three transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq] |
| Other Designations  | ARNT-like protein 1, brain and muscle bHLH-PAS protein JAP3 basic-helix-loop-helix-PAS orphan MOP3 member of PAS superfamily 3                                                                                                                                                                                                                            |

## Publication Reference

- [Synaptic BMAL1 phosphorylation controls circadian hippocampal plasticity.](#)

Ilaria Barone, Nicole M Gilette, Hannah Hawks-Mayer, Jonathan Handy, Kevin J Zhang, Fortunate F Chifamba, Engie Mostafa, Erin M Johnson-Venkatesh, Yan Sun, Jennifer M Gibson, Alexander Rotenberg, Hisashi Umemori, Peter T Tsai, Jonathan O Lipton.

Science Advances 2023 Oct; 9(43):eadj1010.

Application: KA, N/A, Recombinant proteins

- [The circadian clock regulator Bmal1 affects traumatic brain injury in rats through the p38 MAPK signalling pathway.](#)

Bing Li, Di Li, Haibo Ni, Chenglin Liu, Jian Xiong, Huixiang Liu, Rong Gao, Li Zhang, Gang Chen.

Brain Research Bulletin 2022 Jan; 178:17.

Application: Stimulation, Rat, Rat brain

- [Acetylation of BMAL1 by TIP60 controls BRD4-P-TEFb recruitment to circadian promoters.](#)

Petkau N, Budak H, Zhou X, Oster H, Eichele G.

Elife 2019 Jul; 8:e43235.

Application: Func, PI, WB-Re, Recombinant protein

- [A Pit-1 Binding Site Adjacent to E-box133 in the Rat PRL Promoter is Necessary for Pulsatile Gene Expression Activity.](#)

Bose S, Ganguly S, Kumar S, Boockfor FR.

Amino Acids 2016 Feb; 41(6):1390.

Application: Func, Oligos

## Pathway

- [Circadian rhythm - mammal](#)

## Disease

- [Alcoholism](#)
- [Bipolar Disorder](#)
- [Cardiovascular Diseases](#)

- [Chronobiology Disorders](#)
- [Depressive Disorder](#)
- [Diabetes Mellitus](#)
- [Edema](#)
- [Genetic Predisposition to Disease](#)
- [Head and Neck Neoplasms](#)
- [Hypertension](#)
- [Interview](#)
- [Mood Disorders](#)
- [Neoplasm Recurrence](#)
- [Neoplasms](#)
- [Obesity](#)
- [Prostatic Neoplasms](#)
- [Psychiatric Status Rating Scales](#)
- [Psychotic Disorders](#)
- [Schizophrenia](#)
- [Sleep Disorders](#)