BMAL1 Polyclonal Antibody

Product Details	
Size	200 µL
Species Reactivity	Hamster, Human, Mouse, Rat
Published Species	Mouse, Human
Host/Isotype	Rabbit / IgG
Class	Polyclonal
Type	Antibody
Conjugate	Unconjugated
Immunogen	Synthetic Peptide: C D(582) M I D N D Q G S S S P S(594)
Form	Liquid
Concentration	1 mg/mL
Purification	Antigen affinity chromatography
Storage buffer	PBS with 1mg/mL BSA
Contains	0.05% sodium azide
Storage conditions	-20° C, Avoid Freeze/Thaw Cycles
RRID	AB_2059614

Applications	Tested Dilution	Publications
Western Blot (WB)	1:500-1:2,000	2 Publications
Immunohistochemistry (IHC)	-	2 Publications
Immunohistochemistry (Frozen) (IHC (F))	-	1 Publication
Immunocytochemistry (ICC/IF)	2 µg/mL	2 Publications

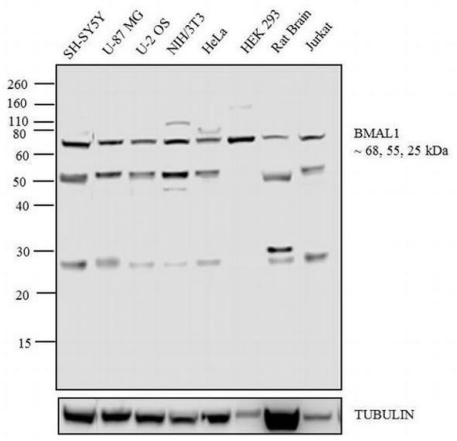
Product Specific Information

PA1-523 detects BMAL1/aryl hydrocarbon nuclear translocator 3 (ARNT3) from hamster and mouse tissues as well as recombinant human BMAL1.

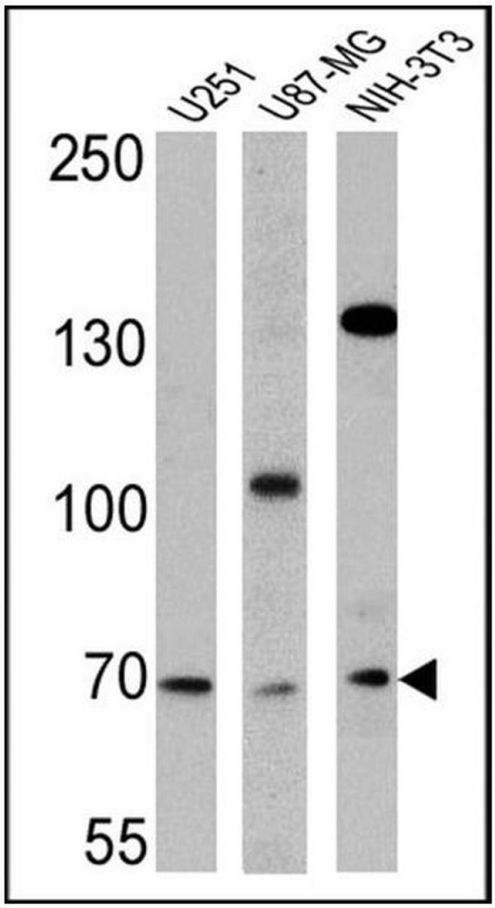
PA1-523 has been sucessfully used in Western blot procedures. By Western blot, this antibody detects a 110 kDa protein which corresponds to the product of a hamster GST-BMAL1 fusion construct overexpressed in E. coli. This antibody detects a non-specific band in U87-MG cell lysates at ~105kDa and in NIH-3T3 cell lysates at ~135kDa.

PA1-523 immunizing peptide corresponds to amino acid residues 582-594 from mouse BMAL1. This sequence is completely conserved between mouse, rat, guinea pig, and human BMAL1. PA1-523 immunizing peptide (Cat. # PEP-075) is available for use in neutralization and control experiments.

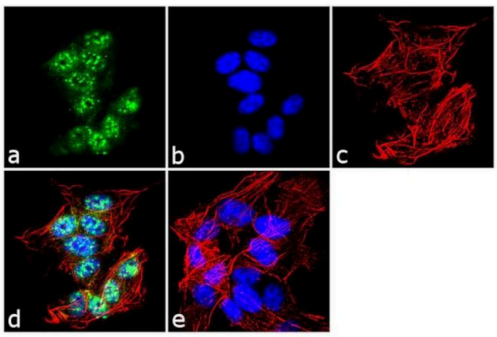
Product Images For BMAL1 Polyclonal Antibody



BMAL1 Antibody (PA1-523) in WB
Western blot analysis was performed on whole cell extracts (30 µg lysate) of SH-SY5Y (Lane 1), U-87 MG (Lane 2), U-2 OS (Lane 3), NIH/3T3 (Lane 4), HeLa (Lane 5), HEK 293 (Lane 6), Rat Brain (tissue extract) (Lane 7) and Jurkat (Lane 8). The blot was probed with Anti-BMAL 1 Rabbit Polyclonal Antibody (Product # PA1-523, 1:100-1:1000 dilution) and detected by chemiluminescence using Goat anti-Rabbit IgG (Heavy Chain) Superclonal™ Secondary Antibody, HRP conjugate (Product # A27036, 0.4 µg/mL, 1:2500 dilution). Three isoforms of 68, 55, 25 kDa corresponding to BMAL 1 were observed across the cell lines and tissue tested. Known quantity of protein samples were electrophoresed using Novex® NuPAGE® 10 % Bis-Tris gel (Product # NP0302BOX), XCell SureLock™ Electrophoresis System (Product # EI0002) and Novex® Sharp Pre-Stained Protein Standard (Product # LC5800). Resolved proteins were then transferred onto a nitrocellulose membrane with iBlot® 2 Dry Blotting System (Product # IB21001). The membrane was probed with the relevant primary and secondary Antibody following blocking with 5 % skimmed milk. Chemiluminescent detection was performed using Pierce™ ECL Western Blotting Substrate (Product # 32106).



BMAL1 Antibody (PA1-523) in WB
Western blot analysis of BMAL1 was performed by loading 25 µg of U251 (Lane 1), U87-MG (Lane 2), and NIH-3T3 cell lysates (Lane 3) and a molecular weight protein ladder onto an SDS polyacrylamide gel. Proteins were transferred to a PVDF membrane and blocked with a blocking buffer at 4ºC overnight. The membrane was probed with a BMAL1 polyclonal antibody (Product # PA1-523) at a dilution of 1:500 overnight at 4°C, washed in TBST, and probed with an HRP-conjugated secondary antibody for 1 hr at room temperature in the dark. Chemiluminescent detection was performed using Pierce ECL Plus Western Blotting Substrate (Product # 32132). Results show a band at 69 kDa in all three cell lines.



BMAL1 Antibody (PA1-523) in ICC/IF
Immunofluorescent analysis of BMAL1 was performed using 70% confluent log phase SH-SY5Y cells. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 10 minutes, and blocked with 1% BSA for 1 hour at room temperature. The cells were labeled with BMAL1 Rabbit Polyclonal Antibody (Product # PA1-523) at 2 µg/mL in 0.1% BSA and incubated for 3 hours at room temperature and then labeled with Goat anti-Rabbit IgG (Heavy Chain) Superclonal™ Secondary Antibody, Alexa Fluor® 488 conjugate (Product # A27034) a dilution of 1:2000 for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with SlowFade® Gold Antifade Mountant with DAPI (Product # S36938). F-actin (Panel c: red) was stained with Alexa Fluor® 555 Rhodamine Phalloidin (Product # R415, 1:300). Panel d represents the merged image showing nuclear localization. Panel e shows the no primary antibody control. The images were captured at 60X magnification.

View more figures on thermofisher.com

7 References

Western Blot (2)

PloS one

The transcription factor Runx2 is under circadian control in the suprachiasmatic nucleus and functions in the control of rhythmic behavior.

"PA1-523 was used in western blot to study the circadian control of Runx2 expression in the suprachiasmatic nucleus and its role in regulating circadian behavioural rhythms"

Authors: Reale ME,Webb IC,Wang X,Baltazar RM,Coolen LM,Lehman MN

Year 2013

Species Mouse

Dilution 1:200

Endocrinology

Expression of circadian rhythm genes in gonadotropin-releasing hormone-secreting GT1-7 neurons.

"PA1-523 was used in western blot to investigate the role of the clock machinery in GnRH neuronal function."

Authors: Gillespie JM,Chan BP,Roy D,Cai F,Belsham DD

Year 2003

Species Mouse

Dilution 1:200 to 1:1,000

Immunohistochemistry (2)

Journal of pineal research

Melatonin modulates daytime-dependent synaptic plasticity and learning efficiency.

"PA1-523 was used in Immunohistochemistry to investigate the role of the neurohormone melatonin as a circadian time cue for hippocampal signaling and memory formation."

Authors: Jilg A,Bechstein P,Saade A,Dick M,Li TX,Tosini G,Rami A,Zemmar A,Stehle JH

Year 2019

Species Mouse

Dilution 1:500

Osteoarthritis and cartilage

Dysregulated circadian rhythm pathway in human osteoarthritis: NR1D1 and BMAL1 suppression alters TGF- signaling in chondrocytes.

"Published figure using BMAL1 polyclonal antibody (Product # PA1-523) in Immunohistochemistry"

Authors: Akagi R,Akatsu Y,Fisch KM,Alvarez-Garcia O,Teramura T,Muramatsu Y,Saito M,Sasho T,Su AI,Lotz MK

Year 2017

Species Human

More applications with references on thermofisher.com

IHC (F) (1) ICC/IF (2)

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization. Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.