ADORA1 Polyclonal Antibody

Product Details	
Size	100 µL
Species Reactivity	Human, Rat
Published Species	Rat, Mouse, Human
Host/Isotype	Rabbit / IgG
Class	Polyclonal
Type	Antibody
Conjugate	Unconjugated
Immunogen	Synthetic peptide corresponding to residues C(309) Q P K P P I D E D L P E E K A E D(326) of rat Adenosine Receptor A1.
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_2222233

Applications	Tested Dilution	Publications
Western Blot (WB)	1:500	5 Publications
Immunohistochemistry (IHC)	-	1 Publication
Immunohistochemistry (Paraffin) (IHC (P))	1:50-1:200	-
Immunocytochemistry (ICC/IF)	2 µg/mL	1 Publication

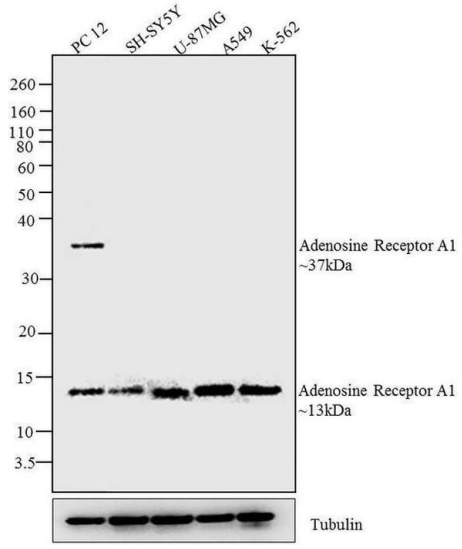
Product Specific Information

PA1-041A detects adenosine receptor A1 (A1AR) in rat tissues. This antibody does not detect other AR subtypes. Previous lots of this antibody have been used in human and bovine samples.

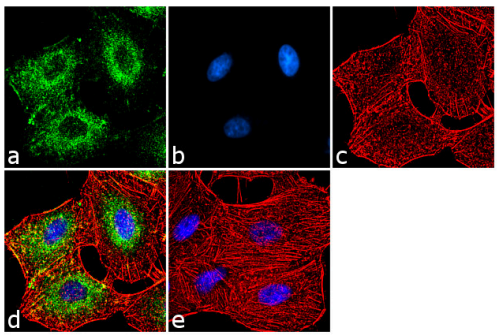
PA1-041A has been successfully used in Immunohistochemistry (paraffin) and Western blot procedures. By Western blot, this antibody detects an ~37 kDa protein in rat brain representing A1AR.

The PA1-041A immunogen is a synthetic peptide corresponding to residues C(309) Q P K P P I D E D L P E E K A E D(326) of rat Adenosine Receptor A1.

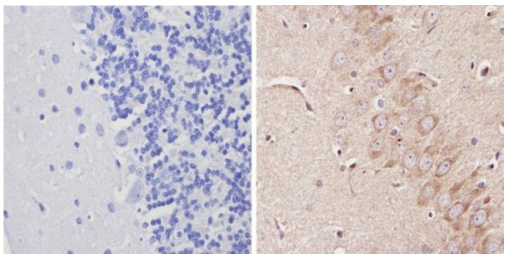
Product Images For ADORA1 Polyclonal Antibody



ADORA1 Antibody (PA1-041A) in WB
Western blot analysis was performed on whole cell extracts (30 µg lysate) of PC 12 (Lane 1), SH-SY5Y (lane 2), U-87MG (lane 3), A549 (Lane 4) and K-562 (lane 5). The blots were probed with Anti-Adenosine receptor A1 Rabbit Polyclonal Antibody (Product # PA1-041A, 1:250-1:1000 dilution) and detected by chemiluminescence Goat Anti-Rabbit IgG Secondary Antibody, HRP conjugate (Product # G-21234, 1:5000 dilution). Two bands 37 and 13 kDa band corresponding to Adenosine receptor A1 was observed across cell lines tested. Known quantity of protein samples were electrophoresed using Novex® NuPAGE® 12 % Bis-Tris gel (Product # NP0342BOX), 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).



ADORA1 Antibody (PA1-041A) in ICC/IF
Immunofluorescence analysis of Adenosine Receptor A1 was done on 70% confluent log phase HeLa 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 Adenosine Receptor A1 Rabbit Polyclonal Antibody (Product # PA1-041A) 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) at 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 is a merged image showing cytoplasmic localization. Panel e is a no primary antibody control. The images were captured at 60X magnification.



ADORA1 Antibody (PA1-041A) in IHC (P)
Immunohistochemistry analysis of Adenosine Receptor A1 showing positive staining in the cytoplasm of paraffin-treated Rat brain tissue (right) compared with a negative control in the absence of primary antibody (left). To expose target proteins, antigen retrieval method was performed using 10mM sodium citrate (pH 6.0) microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature, washed with ddH2O and PBS, and then probed with a Adenosine Receptor A1 polyclonal antibody (Product # PA1-041A) diluted by 3% BSA-PBS at a dilution of 1:100 overnight at 4°C in a humidified chamber. Tissues were washed extensively PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.

7 References

Western Blot (5)

Folia neuropathologica

Prenatal exposure to valproic acid induces alterations in the expression and activity of purinergic receptors in the embryonic rat brain.

"PA1-041A was used in Western Blotting to conclude that, defects in purinergic signalling induced by prenatal VPA exposure could have a profound impact on brain development during embryogenesis and on intellectual and behavioural functions after birth."

Authors: Babiec L,Wilkaniec A,Adamczyk A

Year 2023

Species Rat

Dilution 1:500

Molecular metabolism

Feeding desensitizes A1 adenosine receptors in adipose through FOXO1-mediated transcriptional regulation.

"PA1-041A was used in Western Blotting to propose that FOXO1 drives high A1R expression under fasted conditions to limit excess lipolysis during stress and augment insulin action upon feeding."

Authors: Granade ME,Hargett SR,Lank DS,Lemke MC,Luse MA,Isakson BE,Bochkis IM,Linden J,Harris TE

Year 2022

Species Mouse

View more WB references on thermofisher.com

Immunohistochemistry (1)

Experimental neurology

Neonatal caffeine treatment up-regulates adenosine receptors in brainstem and hypothalamic cardio-respiratory related nuclei of rat pups.

"PA1-041A was used in immunohistochemistry to study the effect of neonatal caffeine treatment on the brainstem and hypothalamic cardio-respiratory related nuclei of rat pups"

Authors: Gaytan SP,Pasaro R

Year 2012

Species Rat

Dilution 1:200

Immunocytochemistry (1)

Molecular systems biology

Systematic protein-protein interaction mapping for clinically relevant human GPCRs.

"PA1-041A was used in Immunocytochemistry to obtain a global view of G-protein-coupled receptor-mediated signalling, and to identify novel components of their pathways."

Authors: Sokolina K,Kittanakom S,Snider J,Kotlyar M,Maurice P,Gandía J,Benleulmi-Chaachoua A,Tadagaki K,Oishi A, Wong V,Malty RH,Deineko V,Aoki H,Amin S,Yao Z,Morató X,Otasek D,Kobayashi H,Menendez J,Auerbach D,Angers S, Pržulj N,Bouvier M,Babu M,Ciruela F,Jockers R,Jurisica I,Stagljar I

Year 2017

Species Human

More applications with references on thermofisher.com