

Product datasheet

Anti-PDE10A antibody [EPR22383] ab227829

KO VALIDATED Recombinant RabMAb

9 Images

Overview

Product name	Anti-PDE10A antibody [EPR22383]
Description	Rabbit monoclonal [EPR22383] to PDE10A
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-Fr, IP Unsuitable for: Flow Cyt, ICC/IF or IHC-P
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide within Human PDE10A aa 600 to the C-terminus. The exact sequence is proprietary. Database link: Q9Y233
Positive control	WB: HeLa whole cell lysate; Wild-type HAP1 whole cell lysate; Human, mouse and rat brain lysates; Mouse testis lysate. IHC-Fr: Mouse and rat brain tissues. IP: HeLa whole cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise[™] guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications & species that this product has been "predicted to work</p>

with," however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR22383
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab227829** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 88 kDa (predicted molecular weight: 88 kDa).
IHC-Fr		1/2000. Perform heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).
IP		1/30.

Application notes Is unsuitable for Flow Cyt, ICC/IF or IHC-P.

Target

Function	Plays a role in signal transduction by regulating the intracellular concentration of cyclic nucleotides. Can hydrolyze both cAMP and cGMP, but has higher affinity for cAMP and is more efficient with cAMP as substrate.
Tissue specificity	Abundant in the putamen and caudate nucleus regions of brain and testis, moderately expressed in the thyroid gland, pituitary gland, thalamus and cerebellum.

Pathway

Purine metabolism; 3',5'-cyclic AMP degradation; AMP from 3',5'-cyclic AMP: step 1/1.
Purine metabolism; 3',5'-cyclic GMP degradation; GMP from 3',5'-cyclic GMP: step 1/1.

Sequence similarities

Belongs to the cyclic nucleotide phosphodiesterase family.
Contains 2 GAF domains.

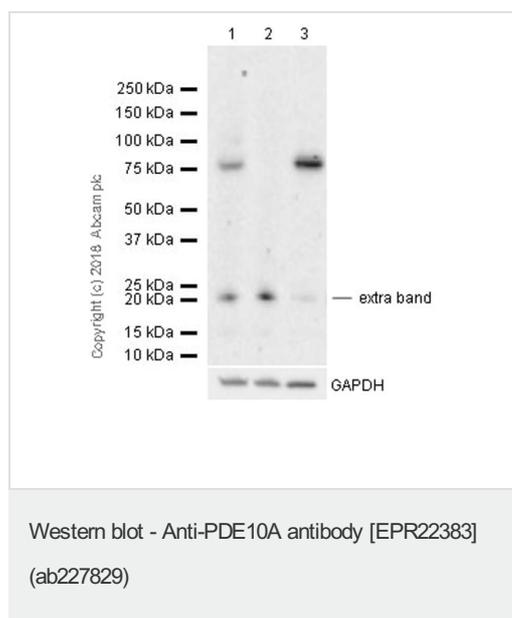
Domain

The tandem GAF domains bind cAMP, and regulate enzyme activity. The binding of cAMP stimulates enzyme activity.
Composed of a C-terminal catalytic domain containing two divalent metal sites and an N-terminal regulatory domain which contains one cyclic nucleotide-binding region.

Cellular localization

Cytoplasm. Located mostly to soluble cellular fractions.

Images



All lanes : Anti-PDE10A antibody [EPR22383] (ab227829) at 1/1000 dilution

Lane 1 : Wild-type HAP1 whole cell lysate

Lane 2 : PDE10A knockout HAP1 whole cell lysate

Lane 3 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 88 kDa

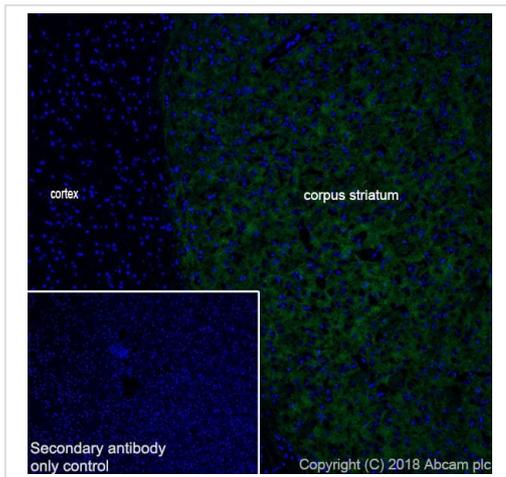
Observed band size: 88 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.

ab227829 was shown to specifically react with PDE10A in wild-type HAP1 cells as signal was lost in PDE10A knockout cells. Wild-type and PDE10A knockout samples were subjected to SDS-PAGE. ab227829 and ab181602 (Rabbit anti-GAPDH loading control) were incubated 1 hour at room temperature at 1/1000 dilution and 1/200,000 dilution respectively. Blots were developed with Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) secondary antibody at 1/100,000 dilution for 1 hour at room temperature before imaging.

The blot was developed on a BIO-RAD[®] ChemiDoc[™] MP instrument using the ECL technique.

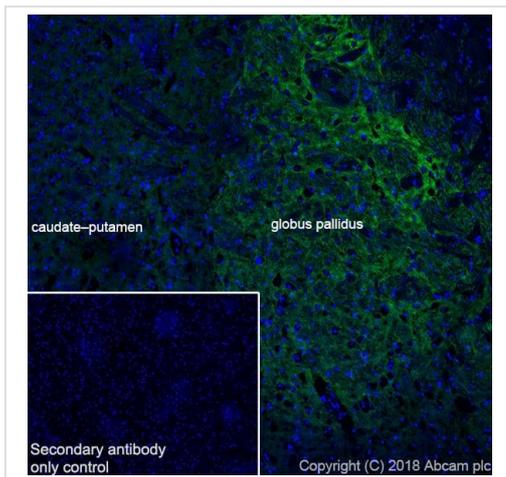


Immunohistochemistry (Frozen sections) - Anti-PDE10A antibody [EPR22383] (ab227829)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen mouse brain tissue labeling PDE10A with ab227829 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) (ab150077) secondary antibody at 1/1000 dilution (green). Cytoplasmic staining on corpus striatum in mouse brain (PMID:16864896) is observed. Counterstained with DAPI (blue).

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) (ab150077) secondary antibody at 1/1000 dilution.

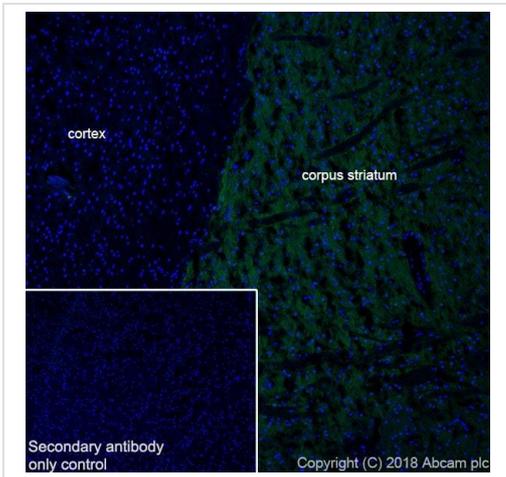


Immunohistochemistry (Frozen sections) - Anti-PDE10A antibody [EPR22383] (ab227829)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen mouse brain tissue labeling PDE10A with ab227829 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) (ab150077) secondary antibody at 1/1000 dilution (green). Cytoplasmic staining on mouse caudate-putamen and globus pallidus in mouse brain (PMID:16864896; PMID:28115486) is observed. Counterstained with DAPI (blue).

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) (ab150077) secondary antibody at 1/1000 dilution.

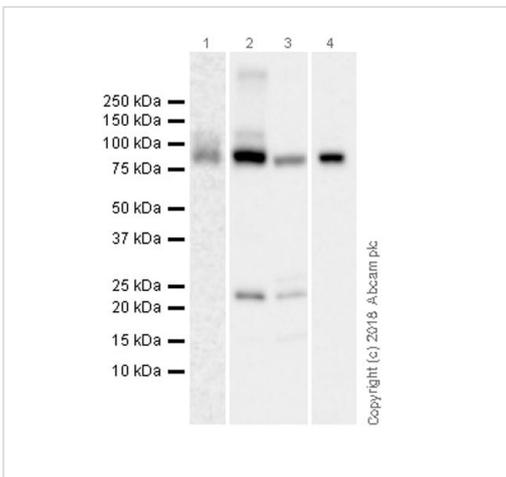


Immunohistochemistry (Frozen sections) - Anti-PDE10A antibody [EPR22383] (ab227829)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen rat brain tissue labeling PDE10A with ab227829 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Cytoplasmic staining on corpus striatum in rat brain (PMID:16864896) is observed. Counterstained with DAPI (blue).

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



Western blot - Anti-PDE10A antibody [EPR22383] (ab227829)

All lanes : Anti-PDE10A antibody [EPR22383] (ab227829) at 1/1000 dilution

Lane 1 : Human brain lysate

Lane 2 : Mouse brain lysate

Lane 3 : Mouse testis lysate

Lane 4 : Rat brain lysate

Lysates/proteins at 20 µg per lane.

Secondary

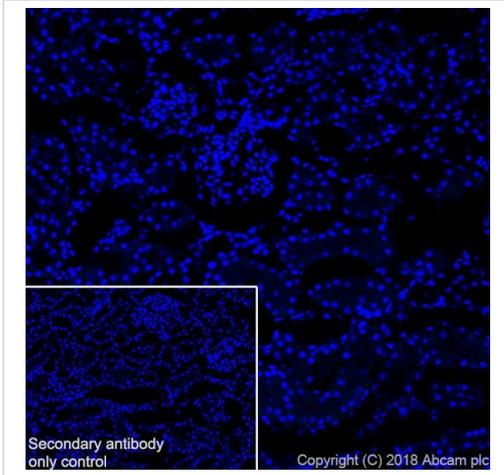
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 88 kDa

Observed band size: 88 kDa

Exposure time : Lane 1: 3 minutes; Lane 2-3: 3 seconds; Lane 4: 26 seconds.

Blocking/Dilution buffer: 5% NFDm/TBST.



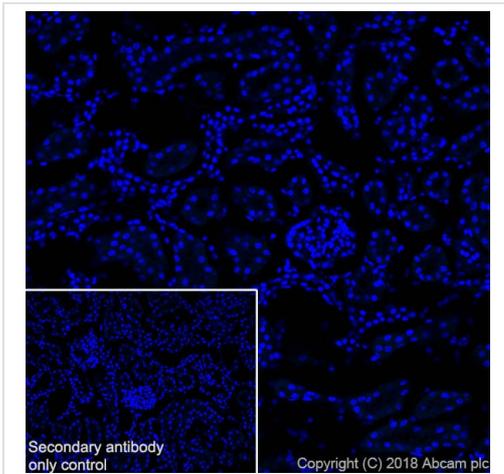
Immunohistochemistry (Frozen sections) - Anti-PDE10A antibody [EPR22383] (ab227829)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen rat kidney tissue labeling PDE10A with ab227829 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) (ab150077) secondary antibody at 1/1000 dilution (green).

Negative control: No staining on rat kidney (PMID:16864896). Counterstained with DAPI (blue).

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) (ab150077) secondary antibody at 1/1000 dilution.



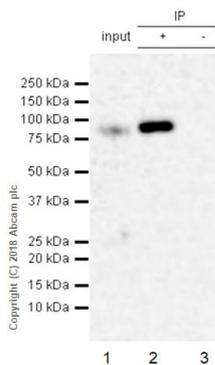
Immunohistochemistry (Frozen sections) - Anti-PDE10A antibody [EPR22383] (ab227829)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen mouse kidney tissue labeling PDE10A with ab227829 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) (ab150077) secondary antibody at 1/1000 dilution (green).

Negative control: No staining on mouse kidney (PMID:16864896). Counterstained with DAPI (blue).

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) (ab150077) secondary antibody at 1/1000 dilution.



Immunoprecipitation - Anti-PDE10A antibody
[EPR22383] (ab227829)

PDE10A was immunoprecipitated from 0.35 mg HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab227829 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab227829 at 1/500 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/1000 dilution.

Lane 1: HeLa whole cell lysate 10 µg (Input).

Lane 2: ab227829 IP in HeLa whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab227829 in HeLa whole cell lysate.

Blocking/Dilution buffer: 5% NFDm/TBST.

Exposure time: 3 minutes.

Why choose a recombinant antibody?

 Research with confidence Consistent and reproducible results	 Long-term and scalable supply Recombinant technology
 Success from the first experiment Confirmed specificity	 Ethical standards compliant Animal-free production

Anti-PDE10A antibody [EPR22383] (ab227829)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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