Product Datasheet

Adenylate Cyclase 3 Antibody - BSA Free
NBP1-92683

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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Publications: 10

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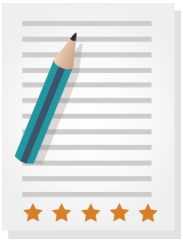
Updated 2/21/2025 v.20.1



NBP1-92683

Adenylate Cyclase 3 Antibody - BSA Free

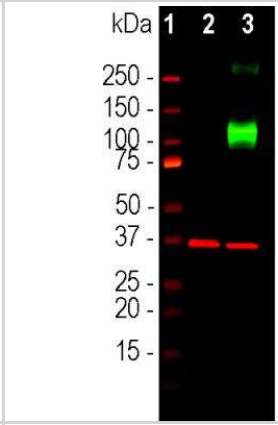
Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.035% Sodium Azide
Purity	Immunogen affinity purified
Buffer	50% PBS, 50% glycerol
Target Molecular Weight	180 kDa

Product Description	
Host	Rabbit
Gene ID	109
Gene Symbol	ADCY3
Species	Human, Mouse, Rat
Reactivity Notes	Use in Rat reported in scientific literature (PMID:34572121). .
Immunogen	C-terminal peptide of rat ACIII, PAAFPNGSSVTLPHQVVDNP with a Cys added to the N-terminus to allow coupling to KLH.

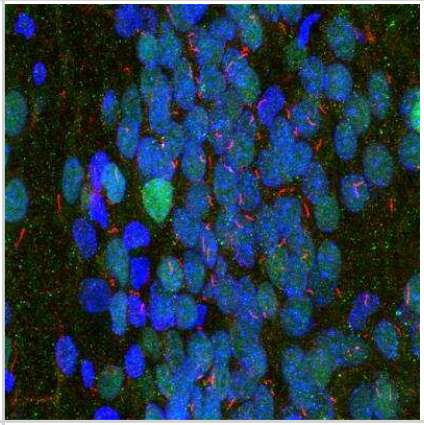
Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Western Blot 1:1000, Immunohistochemistry 1:10000-1:20000, Immunocytochemistry/ Immunofluorescence 1:10000-1:20000
Application Notes	This Adenylate Cyclase 3 antibody is useful for Immunocytochemistry/Immunofluorescence and Western blot, where bands can be seen at 160-200 kDa (depending on the tissue). In WB, bands can be seen at about 200kDa in olfactory epithelium which is rich in cilia. Fewer cilia are found in frontal cortex, and the protein is less heavily glycosylated, and a less prominent band is seen at about 160kDa.

Images

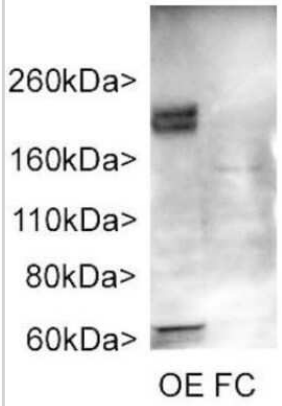
Western Blot: Adenylate Cyclase 3 Antibody [NBP1-92683] - Analysis of HEK293 cell lysates using Adenylate Cyclase 3 antibody, dilution 1:2000 (Green): [1] protein standard, [2] non-transfected HEK293 cells, and [3] HEK293 cells transfected with an expression construct containing a Myc-DDK tagged full length human Adenylate Cyclase 3 cDNA. The strong band at about 130kDa in the transfected cells demonstrates overexpression of the human Adenylate Cyclase 3 protein, and the bands over 250kDa presumably correspond to either glycosylated or aggregated forms of Adenylate Cyclase 3. The blot was simultaneously probed with mouse GAPDH mAb, dilution 1:5000 (Red), which reveals the single band at ~37kDa in both transfected and non-transfected cells.



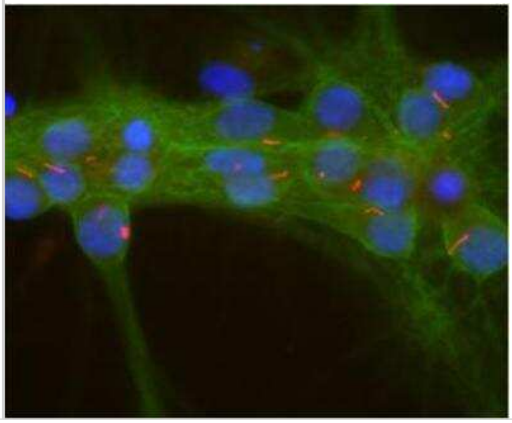
Immunocytochemistry/Immunofluorescence: Adenylate Cyclase 3 Antibody [NBP1-92683] - Analysis of rat hippocampus stained with NBP1-92683 antibody to adenylate cyclase III in red and mouse antibody to MECP2 in green, DNA is revealed with DAPI in blue. This is a stacked confocal image made with a 100X objective lens. The ACIII antibody reveals neuronal cilia while the MECP2 antibody reveals the nuclei of certain neurons to a variable degree.



Western Blot: Adenylate Cyclase 3 Antibody [NBP1-92683] - Western blot of rat olfactory epithelium (OE) and frontal cortex (FC). NBP1-92683 stains a band at about 200kDa in olfactory epithelium which is rich in cilia. Fewer cilia are found in frontal cortex, and the protein is less heavily glycosylated, and a less prominent band is seen at about 160kDa. Data generated in the laboratory of Matt Sarkisian in the University of Florida.



Immunocytochemistry/Immunofluorescence: Adenylate Cyclase 3 Antibody [NBP1-92683] - Mixed neuron-glial cultures stained with Adenylate Cyclase 3 antibody (NBP1-92683, red) and Alpha Fodrin antibody (NBP1-92689, green). Note the strong and clean staining of neuronal cilia. Since Alpha Fodrin is specific for neurons in the CNS, the glial cells in this culture are not recognized by this antibody.



Publications

Zheng B, Hu X, Hu Y et Al. Type III adenylyl cyclase is essential for follicular development in female mice and their reproductive lifespan iScience 2024-06-17 [PMID: 39050703]

Rong-Chang Li, Laurie L. Molday, Chih-Chun Lin, Xiaozhi Ren, Alexander Fleischmann, Robert S. Molday, King-Wai Yau Low signaling efficiency from receptor to effector in olfactory transduction: A quantified ligand-triggered GPCR pathway Proceedings of the National Academy of Sciences of the United States of America 2022-08-01 [PMID: 35914143]

Yang D, Wu X, Wang W et al. Ciliary Type III Adenylyl Cyclase in the VMH Is Crucial for High-Fat Diet-Induced Obesity Mediated by Autophagy Advanced Science 2022-01-01 [PMID: 34783461]

Hua K, Ferland R Fixation methods and immunolabeling for cilia proteins in ciliary and extraciliary locations Methods in Cell Biology 2023-02-24 [PMID: 37164542]

Wu X, Yang D, Zhou Y et al. The role of ciliopathy-associated type 3 adenylyl cyclase in infanticidal behavior in virgin adult male mice iScience 2022-07-15 [PMID: 35754726] (IHC-Fr, Mouse)

Son Y, Choi C, Saha A et al. REEP6 knockout leads to defective beta-adrenergic signaling in adipocytes and promotes obesity-related metabolic dysfunction Metabolism: clinical and experimental 2022-02-09 [PMID: 35150731] (ICC/IF, Mouse)

Iwase, M, Tokiwa, S Et al. Glycerol kinase stimulates uncoupling protein 1 expression by regulating fatty acid metabolism in beige adipocytes. J Biol Chem 2020-05-15 [PMID: 32273338] (ICC/IF, Mouse)

Hampson E, Tsonou E, Baker MJ et al. P-Rex1 Controls Sphingosine 1-Phosphate Receptor Signalling, Morphology, and Cell-Cycle Progression in Neuronal Cells Cells 2021-09-18 [PMID: 34572121] (WB, Rat)

Liu X, Zhou Y, Yang D et al. Type 3 adenylyl cyclase in the MOE is involved in learning and memory in mice Behavioural Brain Research 2020-02-01 [PMID: 32023491] (ICC/IF)

Quinn SN, Graves SH, Dains-McGahee C et al. Adenylyl cyclase 3/adenylyl cyclase-associated protein 1 (CAP1) complex mediates the anti-migratory effect of forskolin in pancreatic cancer cells. Mol. Carcinog. 2016-11-27 [PMID: 27891679]

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Products Related to NBP1-92683

HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP1-92683F	Adenylate Cyclase 3 Antibody [FITC]
H00000109-Q01-10ug	Recombinant Human Adenylate Cyclase 3 GST (N-Term) Protein

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This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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