

Rabbit Polyclonal Anti-PDE10A antibody

Catalog Number: PD10A-101AP

Lot Number:

General Information

Product	PDE10A Antibody
Description	Phosphodiesterase 10A Antibody
Accession #	Uniprot: Q9Y233 GenBank: BAB16383
Verified Applications	CM, ELISA, ICC, IF, IHC, IP, WB
Species Cross Reactivity	Human, Monkey, Mouse, Rat
Host	Rabbit
Immunogen	Synthetic peptide (Human) taken against a common sequence near the 250-325 amino acids downstream of N-terminal region of PDE10A. Synthetic MAP.
Specificity	This antibody has no cross-reactivity against any other PDE family members tested so far. This antibody will detect all PDE10A variants and subtypes.
Alternative Nomenclature	5'-cyclic phosphodiesterase 10A antibody, cAMP and cAMP-inhibited cGMP 3'5'-cyclic phosphodiesterase 10A antibody, FLJ11894 antibody, HSPDE10A antibody, Pde10a antibody

Physical Properties

Quantity	100 µg
Volume	200 µl
Form	Affinity Purified Immunoglobulins
Immunoglobulin & Concentration	0.5 mg/ml IgG in antibody stabilization buffer
Storage	Store at -20°C for long term storage.

Recommended Dilutions

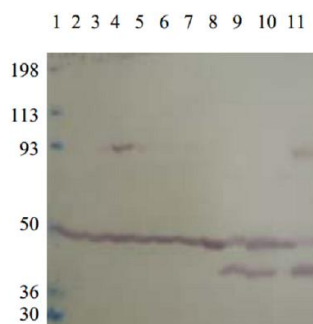
DOT Blot	1:10,000
ELISA	1:10,000
Immunocytochemistry	1:100-1:150
Immunofluorescence	1:100-1:150
Immunohistochemistry	1:100-1:150
Immunoprecipitation	1:200
Western Blot	1:500

Related Products

Catalog

BIOTIN-Conjugated	PD10A-BIOTIN
FITC-Conjugated	PD10A-FITC
Antigenic Blocking Peptide	P-PD10A
Western Blot Positive Control	PC-PD10A
Phospho-PDE10A	PPD10A-140AP
PDE10A2 Antibody	PD10A2-131AP
PDE10A12 Antibody	PDE10A12-121AP

Application Verification:



WB using PD10A-101AP with rat Frontal cortex, Parietal cortex, Striatum, Amygdala, Hypothalamus, Hippocampus, Olfactory bulb, Brain stem, Cerebellum, Spinal cord and whole brain in lanes 1-11 respectively. 1:500 antibody dilution in DiluObuffer.

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

Overview:

Cyclic nucleotides are important intracellular second messengers that play important roles in a variety of signal transduction process. The cyclic nucleotides are hydrolyzed and compartmentalized by a family of enzymes called phosphodiesterases. One of the many phosphodiesterases that compartmentalize and hydrolyze cAMP and cGMP in to AMP and GMP respectively is Phosphodiesterase type 10. The PDE10A gene is expressed in at least two variant forms (PDE10A1, PDE10A2) generated by RNA splicing and or use of alternate initiation sites (1). The PDE10 gene was first cloned from fetal human lung tissue library using bioinformatics approach (2). The deduced amino acid sequence contains 779 amino acids (MW 93-95 kDa) including a putative cGMP binding domain near the N-terminal region of the protein. The catalytic portion is 16-47% identical to other phosphodiesterases and PDE10 hydrolyzes cAMP and cGMP with K_m 0.26 μ M and 7.2 μ M with V_{max} for cGMP twice as much that for cAMP. The presence of cAMP inhibits the hydrolysis of cGMP and vice versa. PDE10A is widely expressed in putamen and caudate nucleus in the brain, thyroid and testis. Surprisingly, the expression of PDE10A was also abundant in Heart (see figure 1).

The PDE10A-selective antibodies are generated against a common sequence near the 250-325 amino acids down stream from N-terminus. The multiple antigenic peptide (MAP) was generated using multiple antigen peptide resin. The polyclonal antibody (PD10A-101AP) labels a 93 and 95 kDa PDE10A1 and PDE10A2 variants in striatum, testis and pancreas. The PDE10A-specific antiserum has no cross reactivity against any other PDE family members tested so far. Western blot positive control samples in "ready-to-use" SDS-PAGE sample buffer and antigenic blocking peptide for PDE10A are available. All antibodies can be conjugated to fluorophores and other secondary enzymes as an additional service. FabGennix provides antibodies to other PDE family members. The PDE-selective antibodies are also available for family-subtype-selective and family-subtype-variant selective antibodies for detailed analyses of cyclic nucleotide signaling pathways. For a complete listing of all FabGennix antibodies and services please visit www.FabGennix.com.

References:

1. Kotera J., Fugishge K., Yuasa K., Omari K. Bio. Chem. Biophys. Res. Comm. 261, 551-557, 1999.
2. Fujishige, K., Kotera J., Omori K. Eur. J. Biochem. 266, 1118-1127, 1999.

* For users who may require large amounts of the products listed above, please inquire about bulk material discounts.
This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.