

## Rabbit Polyclonal PGCA antibody

Catalog Number: PGCA-101AP

Lot Number:

### General Information

<b>Product</b>	PGCA Antibody
<b>Description</b>	Atrial natriuretic peptide receptor 1 Antibody
<b>Accession #</b>	Uniprot: P16066
<b>Verified Applications</b>	CM, ELISA, ICC, IF, IHC, IP, WB
<b>Species Cross Reactivity</b>	Human, Mouse, Rat
<b>Host</b>	Rabbit
<b>Immunogen</b>	Synthetic peptide corresponding to C terminal amino acids 1042-1057 of Human PGCA.
	Sequence: VRTYWLLGERGCSTRG
<b>Specificity</b>	Will label a 127 to 130 kDa protein in various tissues. Will label only PGCA, but not other Particulate Guanylate Cyclases.
<b>Alternative Nomenclature</b>	ANPRA antibody, Atrial natriuretic peptide A type receptor antibody, GC-A antibody, Guanylate cyclase A antibody, GUCY2A antibody, Natriuretic peptide A type receptor antibody, NPR1 antibody, NPRA antibody

### Physical Properties

<b>Quantity</b>	100 µg
<b>Volume</b>	200 µl
<b>Form</b>	Affinity Purified Immunoglobulins
<b>Immunoglobulin &amp; Concentration</b>	0.85 mg/ml IgG in antibody stabilization buffer
<b>Storage</b>	Store at -20°C for long term storage.

### Recommended Dilutions

<b>DOT Blot</b>	1:10,000
<b>ELISA</b>	1:10,000
<b>Immunocytochemistry</b>	1:25-1:250
<b>Immunofluorescence</b>	1:25-1:250
<b>Immunohistochemistry</b>	1:25-1:250
<b>Immunoprecipitation</b>	1:200
<b>Western Blot</b>	1:500

## Related Products

## Catalog #

<b>BIOTIN-Conjugated</b>	PGCA-BIOTIN
<b>FITC-Conjugated</b>	PGCA-FITC
<b>Antigenic Blocking Peptide</b>	P-PGCA
<b>Western Blot Positive Control</b>	PC-PGCA
<b>Phospho-PGCA Antibody</b>	PPGCA-140AP

## Application Verification:



WB of PGCA-101AP with PC-PGCA. 1:500 antibody, dilution in DiluObuffer. Apparent MW is 135 kDa.

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:

The intracellular levels of cyclic GMP (cGMP) are maintained by the activity of opposing enzymes: synthesizing guanylyl cyclases (GC) and hydrolyzing phosphodiesterases (PDEs). The synthesizing enzymes (GCs) are found in two forms: cytosolic (soluble) and membrane-bound (particulate). While they share similar structural characteristics, they differ in their mechanisms of physiological regulations. Most importantly, sGC contains a heme group and binds NO that activates the enzyme, while particulate GC is stimulated by natriuretic peptides.

Currently seven different isoforms of particulate guanylate cyclases have been characterized, (PGCA-PGCG) and are expressed in most tissues in isoform specific manner. There is significant structural homology among various PGCs: there is a large N-terminal extracellular domain, a single transmembrane domains and a large intracellular domain with protein kinase activity, a C-terminal catalytic domain, and in between is a dimerization domain. Both PGC-A and PGC-B are phosphorylated at Serine residues in the protein kinase domain (2). Non-ionic detergents stimulated particulate guanylate cyclase activity in cerebral cortex of rat 8- to 12-fold while stimulation of soluble enzyme was 1.3- to 2.5-fold. Among various detergents (3). It has been shown that a significant number hippocampal astrocytes (67%) contained both soluble and particulate guanylate cyclases in the same cell (2).

The PGCA-selective antibodies were generated against conserved sequences near the C-terminus of the Particulate Guanylyl cyclase A protein that are unique to PGC-A protein. The PGC-A-selective antibodies are affinity purified against immobilized antigen based affinity chromatography which yielded epitope-specific antibodies. The PGC-A antibodies label a 127-130 kDa protein in various tissues including brain, kidney and spleen. Western blot positive control samples in ready-to-use SDS-PAGE sample buffer (PC-PGCA) and antigenic blocking peptide for PGCA (P-PGCA) are available. All antibodies can be conjugated to fluorophores and other secondary enzymes as an additional service. FabGennix provides custom antibody production services for researchers that are looking for high affinity monoclonal and polyclonal antibodies in various host animal species. For a complete listing of all FabGennix antibodies and services please visit [www.FabGennix.com](http://www.FabGennix.com).

### References:

1. Wedel B. J and Garbers D. L., *Trend Endocrinol. Met.* 9, 213-219; 1998
2. Kobialka M and Gorczyca WA. *Acta Biochimica Polonica* 47, 517-528, 2000.
3. Deguch T., Amano E., Nakeane M. J. *Neurochem.* 27, 1027-1034, 1976.
4. Teunissen C et. al., *Brain Res.* 891, 206-212; 2001.

\* 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.