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Guanylyl Cyclase alpha 2 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55193

Specification

Guanylyl Cyclase alpha 2 Polyclonal Antibody - Product Information

Application	**WB, IHC-P, IHC-F, IF, ICC, E**
Primary Accession	P33402
Reactivity	**Rat, Pig, Dog, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**83 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human Guanylyl Cyclase alpha 2**
Epitope Specificity	**401-500/732**
Isotype	**IgG**

Purity
affinity purified by Protein A

Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Cytoplasm.**
SIMILARITY	**Belongs to the adenylyl cyclase class-4/guanylyl cyclase family. Contains 1 guanylate cyclase domain.**
SUBUNIT	**Heterodimer of an alpha and a beta chain.**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
Guanylate cyclases belong to the adenylyl cyclase class-4/guanylyl cyclase family. There are two forms of guanylate cyclase. The soluble form, known as GCS or sGC, act as receptors for nitric oxide (NO). The membrane-bound receptor form, known as GC, are peptide hormone receptors. GCS is a cGMP-synthesizing enzyme, which is the major receptor for the neurotransmitter nitric oxide. It plays a crucial role in smooth muscle contractility, platelet reactivity and neurotransmission. GCS is a heme-containing heterodimer, consisting of one alpha subunit and one beta subunit. The heme moeity mediates NO activation, and this heme group also binds carbon monoxide (CO), which weakly stimulates the enzyme. Both NO and CO stimulation are enhanced by the allosteric activator 3-(5'-hydroxymethyl-2'furyl)-benzyl-indazole, YC-1. YC-1 can also stimulate GCS in a NO-independent manner. Both alpha and beta subunits are required for cGMP generation, and at least two isoforms exist for each subunit. Heterodimers consisting of alpha-1/beta-1 and alpha-2/beta-1 have been identified, and both display similar enzymatic activity. The distribution of the beta-2 subunit seems to be much more restricted than the beta-1 subunit, with predominant expression in kidney and liver.

Guanylyl Cyclase alpha 2 Polyclonal Antibody - Additional Information

Gene ID 2977

Other Names
Guanylate cyclase soluble subunit alpha-2, GCS-alpha-2, 4.6.1.2, GUCY1A2, GUC1A2, GUCSA2

Target/Specificity
Isoform 1 is expressed in fetal brain, liver, colon, endothelium and testis. Isoform 2 is expressed only in liver, colon and endothelium.

Dilution
WB~~1:1000<br \>IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A<br \>E~~N/A

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

Guanylyl Cyclase alpha 2 Polyclonal Antibody - Protein Information

Name GUCY1A2

Synonyms GUC1A2, GUCSA2

Function
Has guanylyl cyclase on binding to the beta-1 subunit.

Cellular Location
Cytoplasm.

Tissue Location
Isoform 1 is expressed in fetal brain, liver, colon, endothelium and testis. Isoform 2 is expressed only in liver, colon and endothelium

Guanylyl Cyclase alpha 2 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Guanylyl Cyclase alpha 2 Polyclonal Antibody - Images