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Guanylyl Cyclase alpha 2 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55193

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	81750
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.

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=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C 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 °C.

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