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Guanylate Cyclase Rabbit pAb

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Catalog # AP56236

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	O75343
Predicted	Rat, Pig, Dog, Human, Mouse, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	70368
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Guanylate Cyclase
Epitope Specificity	651-750/732
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	Cytoplasmic.
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. 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 (NO). It plays a crucial role in smooth muscle contractility, platelet reactivity and neurotransmission. GCS is a heme containing heterodimer, consisting of one ?subunit and one beta subunit. The heme moeity mediates NO activation, and this heme group also binds carbon monoxide, 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

Other Names	Guanylate cyclase soluble subunit beta-2, GCS-beta-2, 4.6.1.2, GUCY1B2
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000

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	GUCY1B2
Function	Probably a non-functional pseudogene. In mouse, the functional ortholog acts as a soluble guanylate cyclase that senses low environmental oxygen in sensory neurons of the main olfactory epithelium.
Cellular Location	Cell projection, dendrite {ECO:0000250|UniProtKB:Q8BXH3}. Cytoplasm, cytosol {ECO:0000250|UniProtKB:P22717}
Tissue Location	Expressed in gastric signet ring cell carcinoma, but not in the normal stomach.

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