

bs-13544R**[Primary Antibody]****BioSS**
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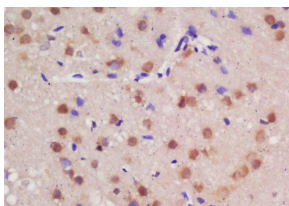
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Guanylyl Cyclase alpha 1 Rabbit pAb**— DATASHEET —**

Host: Rabbit	Isotype: IgG	Applications: IHC-P (1:100-500)
Clonality: Polyclonal		IHC-F (1:100-500)
GeneID: 2982	SWISS: Q02108	IF (1:100-500)
Target: Guanylyl Cyclase alpha 1		Reactivity: Rat (predicted: Human, Mouse, Rabbit, Pig, Cow, Dog, Horse)
Immunogen: KLH conjugated synthetic peptide derived from human Guanylyl Cyclase alpha 1: 301-400/690.		
Purification: affinity purified by Protein A		Predicted MW.: 77 kDa
Concentration: 1mg/ml		Subcellular Location: Cytoplasm
Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.		
Background: Guanylate cyclases belong to the adenylyl cyclase class-4/guanylyl cyclase family. There are two forms of guanylate cyclase. The soluble forms, known as GCS or sGC, act as receptors for nitric oxide. The membrane-bound receptor forms, known as GC, are peptide hormone receptors. GCS, a cGMP-synthesizing enzyme, 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 alpha subunit, designated GCS-alpha-1, and one beta subunit. The heme moiety 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 the 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.		

— VALIDATION IMAGES —

Tissue/cell: rat brain tissue; 4%
Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Incubation: Anti-GCS alpha 1 Polyclonal Antibody, Unconjugated(bs-13544R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

— SELECTED CITATIONS —

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

- **[IF=11.15]** Liu, Yiwei. et al. An electrochemical nitric oxide generator for in-home inhalation therapy in pulmonary artery hypertension. BMC MED. 2022 Dec;20(1):1-13 WB ;Pig. 36522645
- **[IF=3.69]** Rui Chen. et al. Tongmai Yangxin pill reduces myocardial No-reflow via endothelium-dependent NO-cGMP signaling by activation of the cAMP/PKA pathway. J Ethnopharmacol. 2021 Mar;267:113462 WB ;Rat. 33058924