

Anti-Guanylyl Cyclase alpha 1 Polyclonal Antibody

Product Details

Ig Type:	IgG
Reactivity:	Rat (predicted: Human, Mouse, Dog, Pig, Cow, Horse, Rabbit)
Molecular Weight:	Theoretical: 77 kDa.
Purification:	Protein A purified

Applications

Verified Activity:	Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01 M, pH 6.0), Boiling bathing for 15 min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30 min; Blocking buffer (normal goat serum) at 37°C for 20 min; Incubation: Anti-GCS alpha 1 Polyclonal Antibody, Unconjugated (TMAB-06856) 1: 200, overnight at 4°C, followed by conjugation to the secondary antibody and DAB staining
Application:	IHC-P, IHC-Fr, IF
Recommended	IHC-P: 1:100-500; IHC-Fr: 1:100-500; IF: 1:100-500

Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	KLH conjugated synthetic peptide: human Guanylyl Cyclase alpha 1
Antigen Species:	Human
Gene ID:	2982
Uniprot ID:	Q02108

Research 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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