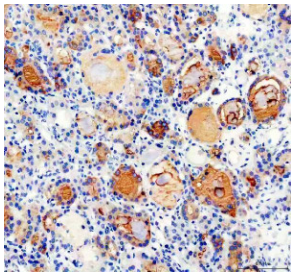
PDE5A Antibody / cGMP Specific Phosphodiesterase Antibody (R32652)

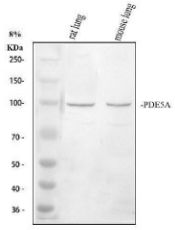
Catalog No.	Formulation	Size
R32652	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	O76074
Localization	Cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This PDE5A Antibody / cGMP Specific Phosphodiesterase Antibody is available for research use only.



PDE5A Antibody Human Thyroid Cancer IHC. Immunohistochemistry was performed on paraffin-embedded human thyroid cancer tissue using PDE5A Antibody at 2 ug/mL. Heat-induced epitope retrieval was carried out in pH 8 EDTA buffer, and the tissue was incubated with the primary antibody overnight at 4Â°C. Bound antibody was detected using an HRP-conjugated goat anti-rabbit IgG secondary antibody with DAB chromogen. Distinct cytoplasmic staining is observed in the thyroid carcinoma cells, consistent with PDE5A expression, while surrounding stromal elements exhibit comparatively low background staining. These results demonstrate that this cGMP Specific Phosphodiesterase Antibody is suitable for immunohistochemical detection of PDE5A in formalin-fixed, paraffin-embedded human thyroid cancer tissue.



PDE5A Antibody Mouse and Rat Lung WB. Western blot analysis was performed using PDE5A Antibody at 0.5 ug/mL. Lane 1: rat lung tissue lysate; lane 2: mouse lung tissue lysate. Proteins were separated on an 8% SDS-PAGE gel, transferred to a nitrocellulose membrane, and the blot was incubated with the primary antibody overnight at 4Â°C. Bound antibody was detected using an HRP-conjugated goat anti-rabbit IgG secondary antibody and enhanced chemiluminescence. A specific immunoreactive band is detected at approximately 100 kDa in both rat and mouse lung lysates, consistent with the expected molecular weight of PDE5A. These results demonstrate that this cGMP Specific Phosphodiesterase Antibody is suitable for Western blot detection of PDE5A in rodent tissues.

Description

PDE5A Antibody recognizes cGMP Specific Phosphodiesterase, a cyclic nucleotide phosphodiesterase encoded by the PDE5A gene that specifically hydrolyzes cyclic guanosine monophosphate (cGMP) to its inactive form. By regulating intracellular cGMP concentrations, PDE5A plays a central role in controlling smooth muscle tone, vascular function, platelet activity, and nitric oxide-mediated signaling pathways. Because cGMP signaling influences numerous physiological processes, including vasodilation, cardiac function, pulmonary circulation, and neuronal communication, PDE5A has become one of the most extensively studied members of the phosphodiesterase enzyme family. NSJ Bioreagents supplies this PDE5A Antibody to support reliable detection of cGMP Specific Phosphodiesterase in a broad range of research applications.

PDE5A is expressed in numerous tissues, with particularly abundant levels reported in vascular smooth muscle, corpus cavernosum, lung, heart, platelets, and selected regions of the central nervous system. The enzyme serves as a critical negative regulator of nitric oxide-cGMP signaling by terminating cGMP-dependent signal transduction following activation of soluble guanylate cyclase. Multiple alternatively spliced isoforms have been described, allowing tissue-specific regulation of enzyme expression and activity. Researchers commonly use PDE5A Antibody in Western blotting, immunohistochemistry, immunofluorescence, and related immunodetection techniques to investigate protein distribution, expression levels, and cellular localization in both physiological and experimental disease models.

Interest in PDE5A extends across cardiovascular biology, pulmonary research, neuroscience, reproductive biology, and oncology. Pharmacological inhibition of PDE5A increases intracellular cGMP concentrations, promoting activation of protein kinase G and downstream signaling pathways that regulate vascular relaxation, cellular proliferation, inflammation, and tissue remodeling. Consequently, cGMP Specific Phosphodiesterase remains an important molecular target in studies of pulmonary hypertension, erectile physiology, cardiac remodeling, fibrosis, and additional disorders involving dysregulated cyclic nucleotide signaling. Continued investigation of PDE5A has also expanded understanding of cross-talk between cyclic guanosine monophosphate and cyclic adenosine monophosphate signaling networks.

PDE5A Antibody enables the analysis of cGMP Specific Phosphodiesterase expression in experimental systems, supporting investigations of nitric oxide signaling, cyclic nucleotide metabolism, vascular physiology, and disease-associated changes in PDE5A regulation.

Explore our Signal Transduction Antibodies page to discover additional antibodies for studying cyclic nucleotide signaling, protein kinases, phosphatases, phosphodiesterases, and other key signaling proteins.

Application Notes

Optimal dilution of the PDE5A Antibody / cGMP Specific Phosphodiesterase Antibody should be determined by the researcher.

Immunogen

Amino acids 20-63 (QKQQQRDQDSVEAWLDDHWDFTFSYFVRKATREMVNAWFAERVH) from the human protein were used as the immunogen for the PDE5A antibody.

Storage

After reconstitution, the PDE5A antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

cGMP Specific Phosphodiesterase antibody, Phosphodiesterase 5A antibody, cGMP Phosphodiesterase antibody, Cyclic GMP Specific Phosphodiesterase antibody, PDE5 antibody, cGMP Binding Phosphodiesterase antibody

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