

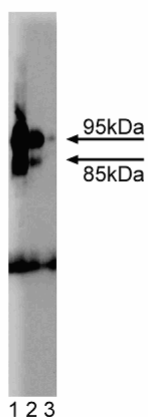
Technical Data Sheet

Purified Mouse Anti-Rat cGB-PDE**Product Information**

Material Number:	611499
Alternate Name:	PDE5; cGMP-Binding PhosphoDiesterases
Size:	150 µg
Concentration:	250 µg/ml
Clone:	54/cGB-PDE
Immunogen:	Rat cGB-PDE aa. 2-108
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat
Target MW:	85-95 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

cGMP is involved in nitric oxide signaling, as well as cell signaling associated with natriuretic peptides and guanylin. Intracellular targets for cGMP include cGMP-dependent protein kinase, cyclic nucleotide-gate ion channels, and cGMP-Binding PhosphoDiesterases (cGB-PDE). Tissue levels of cGMP are determined by guanylyl cyclases that catalyze the formation of cGMP and cyclic nucleotide PDEs that catalyze the breakdown of cGMP. In the PDE superfamily PDE2, PDE5, PDE6, and PDE10 have dimeric structures that contain highly cGMP-specific allosteric cGMP binding sites in addition to a phosphodiesterase catalytic site. PDE5 is highly expressed in aorta and lung, but is also expressed in intestine, kidney, adrenal gland, cerebellum, and cerebrum. In the cerebellum, PDE5 is expressed in the Purkinje cell layer during neonatal development. PDE5 is also abundant in vascular smooth muscle cells where it is involved in regulating cGMP levels and vascular smooth muscle tonicity. Thus, PDE5 is important for regulating cGMP levels in both neuronal and non-neuronal tissues that utilize cGMP signaling pathways for the regulation of cell function.



Western blot analysis of cGB-PDE on a rat lung lysate.
Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of the mouse anti-rat cGB-PDE antibody.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at -20°C.

Application Notes**Application**

Western blot	Routinely Tested
Immunofluorescence	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

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Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

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- Kotera J, Yanaka N, Fujishige K. Expression of rat cGMP-binding cGMP-specific phosphodiesterase mRNA in Purkinje cell layers during postnatal neuronal development. *Eur J Biochem.* 1997; 249(2):434-442.(Biology)