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## Recombinant Human PDE5A Protein, N-His

Catalog Number: bs-105705P

Species: Human

AA Seq: 321-482/875

Predicted MW: 20.87 kDa

Tags: N-His

Purity: >90% as determined by SDS-PAGE.

Purification: AC

Form: Lyophilized

Storage: Lyophilized from a solution in PBS pH 7.4, 0.02% NLS, 1mM EDTA, 4% Trehalose, 1% Mannitol.

Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8°C for frequent use. Store at -20 to -80°C for twelve months from the date of receipt.

**Background:** The cGMP specific phosphodiesterase type 5A (PDE5A) family is comprised of 2 genes (PDE5A and PDE5B) each with multiple splice variants generated by RNA splicing and use of alternate initiation sites. The PDE5 is highly expressed in aorta and lungs, intestine, kidney adrenal gland cerebellum and cerebrum. In cerebellum the PDE5 is highly expressed during neonatal development in Purkinje cells layer. The PDE5 is also abundant in vascular smooth muscle regulating cGMP levels and vascular smooth muscle tonicity. In corpus cavernosum inhibition of PDE5 by sildenafil corrects erectile dysfunctions. The nitric oxide donor sodium nitroprusside (SNP) stimulate PDE5 activity by cGMP dependent kinase phosphorylation. PDE5A1 has 875 amino acids (99.5 kDa). The amino terminal 142 amino acid of the PDE5 gene showed no sequence homology with other PDEs and also contained serine 92 that is phosphorylated by cGMP kinases.