

Active Recombinant Human PDE5A Protein, His-tagged

Cat. No. PDE5A-2567H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Human PDE5A Protein(Glu536~Gln860), fused with N-terminal His tag, was expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	536-860 aa
Form	PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.
Bio-activity	Phosphodiesterase 5A (PDE5A) is a key enzyme that regulates cellular signaling by hydrolyzing cyclic guanosine monophosphate (cGMP), a second messenger involved in smooth muscle relaxation and vasodilation. It is best known as the therapeutic target for sildenafil (Viagra) in treating erectile dysfunction and pulmonary arterial hypertension, where its inhibition increases cGMP levels to enhance blood flow. Research also explores its roles in cardiac function and cancer. Meanwhile, PDE5A can form a functional complex with ALDH7A1, an aldehyde dehydrogenase, potentially linking cGMP signaling to cellular metabolism and stress response pathways. Thus a functional ELISA assay was conducted to detect the interaction of recombinant PDE5A and recombinant ALDH7A1. Briefly, PDE5A was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to ALDH7A1-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-PDE5A pAb, then aspirated and washed 3

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times. After incubation with HRP labelled secondary antibody for 1h at 37°C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50 µ stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant PDE5A and recombinant ALDH7A1 was shown, the EC50 for this effect is 0.005g/mL.

Molecular Mass	41.3kDa
Endotoxin	<1.0EU per 1g (determined by the LAL method)
Purity	> 90%
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month, at -20°C for 12 months. Aliquot and store at -80°C for 12 months.
Reconstitution	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name	PDE5A phosphodiesterase 5A, cGMP-specific [Homo sapiens]
Official Symbol	PDE5A
Synonyms	PDE5A; phosphodiesterase 5A, cGMP-specific; cGMP-specific 3,5-cyclic phosphodiesterase; phosphodiesterase isozyme 5; cGMP-specific phosphodiesterase PDE5A2; cGMP-specific phosphodiesterase type 5A; cGMP-binding cGMP-specific 3,5-cyclic nucleotide phosphodiesterase; CN5A; PDE5; CGB-PDE;
Gene ID	8654

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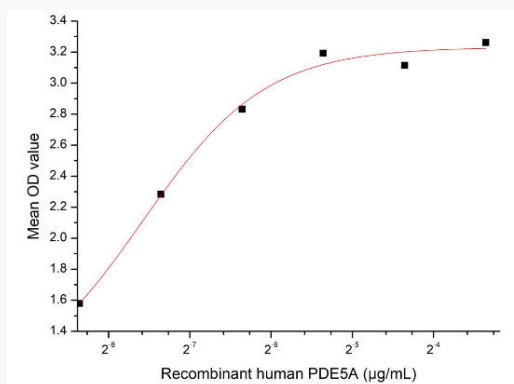
mRNA Refseq [NM_001083](#)

Protein Refseq [NP_001074](#)

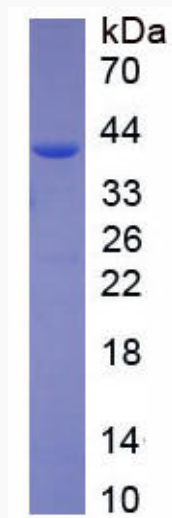
MIM [603310](#)

UniProt ID [O76074](#)

Activity



SDS-PAGE



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