

Active Recombinant Human PDE5A Protein, His-MBP-tagged

Cat. No. PDE5A-26H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Human PDE5A Protein(536-860 aa), fused with N-terminal His tag and MBP tag, is expressed in HEK293.
Species	Human
Source	HEK293
ProteinLength	536-860 aa
Form	PBS, pH7.4, containing 5% Trehalose.
Bio-activity	PDE5A-1E is a splice variant of phosphodiesterase 5A (PDE5A), a key member of the PDE superfamily that hydrolyzes cyclic guanosine monophosphate (cGMP), a critical second messenger regulating smooth muscle relaxation, vascular tone and cellular signaling. Expressed prominently in vascular smooth muscle, penile tissue and platelets, PDE5A-1E retains the core catalytic domain of wild-type PDE5A, enabling it to degrade cGMP and modulate downstream physiological processes like penile erection and blood pressure regulation. As a unique isoform, it has distinct tissue expression patterns and functional characteristics compared to other PDE5A variants, making it a vital therapeutic target for erectile dysfunction and pulmonary arterial hypertension. Additionally, PDE5A-1E physically interacts with APRT, forming a protein complex with unclear functional implications. Thus a functional ELISA assay was conducted to detect the interaction of recombinant human PDE5A-1E and recombinant human APRT. Briefly, PDE5A-1E was diluted serially in PBS with 0.01%

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BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to APRT-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-PDE5A-1E pAb, then aspirated and washed 3 times. After incubas. 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 human PDE5A-1E and recombinant human APRT was shown, the EC50 for this effect is 0.128g/mL.

Molecular Mass	79.6kDa
Endotoxin	<1.0EU per 1µg (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;

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Gene ID 8654

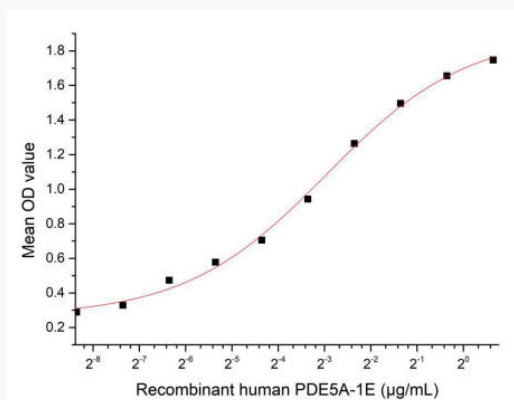
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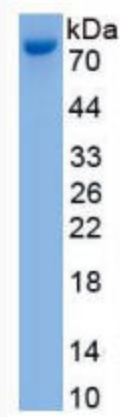
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UniProt ID O76074

Activity



SDS-PAGE



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