APF645Hu61 50μg
Active Phosphodiesterase 5A, cGMP Specific (PDE5A)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Eukaryotic expression.
Host: 293F cell
Residues: Glu536~Gln860
Tags: Two N-terminal Tags, His-tag and MBP-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 5% Trehalose .
Original Concentration: 120μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 6.9
Predicted Molecular Mass: 79.6kDa
Accurate Molecular Mass: 80kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8°C for one month.
Aliquot and store at -80°C for 12 months.
Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the

protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

ETREL QSLAAAVVPS
AQTLKITDFS FSDFELSDLE TALCTIRMFT DLNLVQNFQM KHEVLCRWIL
SVKKNYRKNV AYHNWRHAFN TAQCMFAALK AGKIQNKLTD LEILALLIAA
LSHDLDHRGV NNSYIQRSEH PLAQLYCHSI MEHHHFDQCL MILNSPGNQI
LSGLSIEEYK TTLKIIKQAI LATDLALYIK RRGEFFELIR KNQFNLEDPH
QKELFLAMLM TACDLSAITK PWPIQQRIAE LVATEFFDQG DRERKELNIE
PTDLMNREKK NKIPSMQVGF IDAICLQLYE ALTHVSEDCF PLLDGCRKNR
QKWQALAEQQ

[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% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to APRT-coated microtiter wells and incubated for 1h at 37℃. 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℃. Finally, add 50 μL 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 in Figure 1, the EC50 for this effect is 0.128μg/mL.

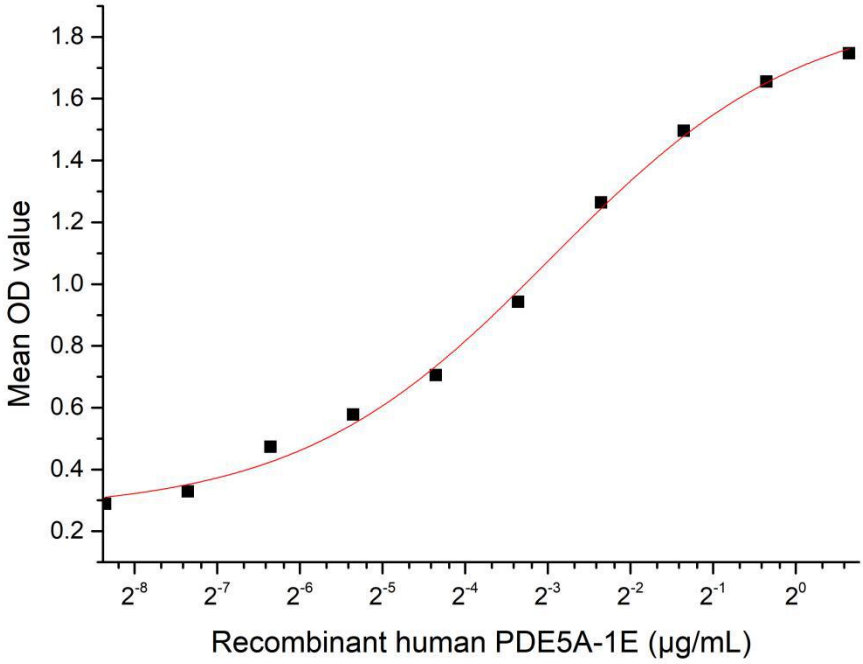

Figure 1. The binding activity of recombinant human PDE5A-1E and human APRT

[IDENTIFICATION]

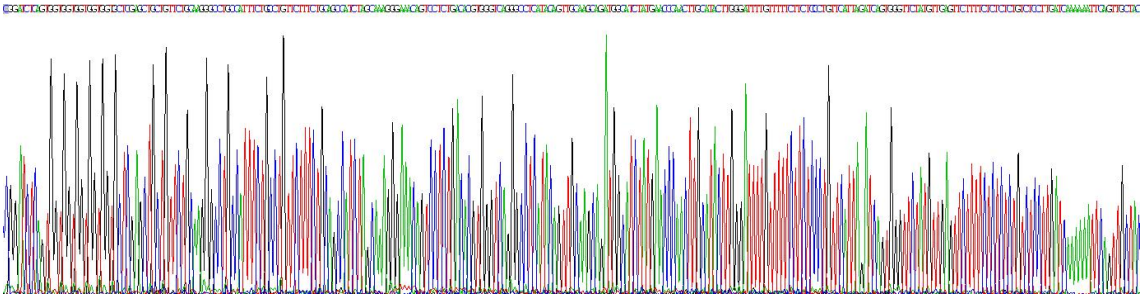

Figure 2. Gene Sequencing (extract)

Figure 3. SDS-PAGE

Sample: Active recombinant PDE5A, Human

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.