**APE475Mu62 100μg**
**Active Prestin (PRES)**
**Organism Species: *Mus musculus (Mouse)***
***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:** Ser505~Ala744
**Tags:** N-terminal His-tag
**Purity:** >90%
**Endotoxin Level:** <1.0EU per 1μg (determined by the LAL method).
**Buffer Formulation:** PBS, pH7.4, containing 5% Trehalose .
**Original Concentration:** 200μg/mL
**Applications:** Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
**Predicted isoelectric point:** 4.3
**Predicted Molecular Mass:** 28.0kDa
**Accurate Molecular Mass:** 35kDa as determined by SDS-PAGE reducing conditions.
Phenomenon explanation:
The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

## [ 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 37°C 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 ]

SPSYKVLGQLPDTDVYIDIDAYEEVKEIPGIKIFQINAPIYYANSDLYSSALKRKTGVNPALIMGARR
KAMRKYAKEVGNANVANATVVKVDAEVDGENATKPEEEDDEVKFPPIVIKTTFPEELQRFLPQG
ENVHTVILDFTQVNFVDSVGVKTLAGIVKEYGDVGIYVYLAGCSPQVVNDLTRNNFFENPALKEL
LFHSIHDAVLGSQVREAMAEQEATASLPQEDMEPNATPTTPEA

## [ ACTIVITY ]

Prestin (PRES), encoded by the SLC26A5 gene, is a key motor protein exclusively expressed in outer hair cells (OHCs) of the mammalian cochlea. It mediates the unique "electromotility" of OHCs—rapid shape changes in response to electrical signals—which amplifies sound vibrations and enhances hearing sensitivity. As a member of the SLC26 anion transporter family, prestin uses voltage-dependent conformational shifts to drive OHC length changes, a process critical for fine-tuning auditory responses. Currently, there is no direct evidence of physical binding between prestin (PRES) and CFTR; their functional interactions in ion homeostasis remain to be clarified.Briefly, CFTR was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to PRES-coated microtiter wells and incubated for 1h at 37℃. Wells were washed

with PBST and incubated for 1h with anti-CFTR pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. 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.Measured by its binding ability in a functional ELISA. When Recombinant PRES is Immobilized at 2 μg/mL(100 uLwell), the concentration of CFTR that produces 50% optimal bindingresponse is found to be approximately 0.39287 μg/mL.

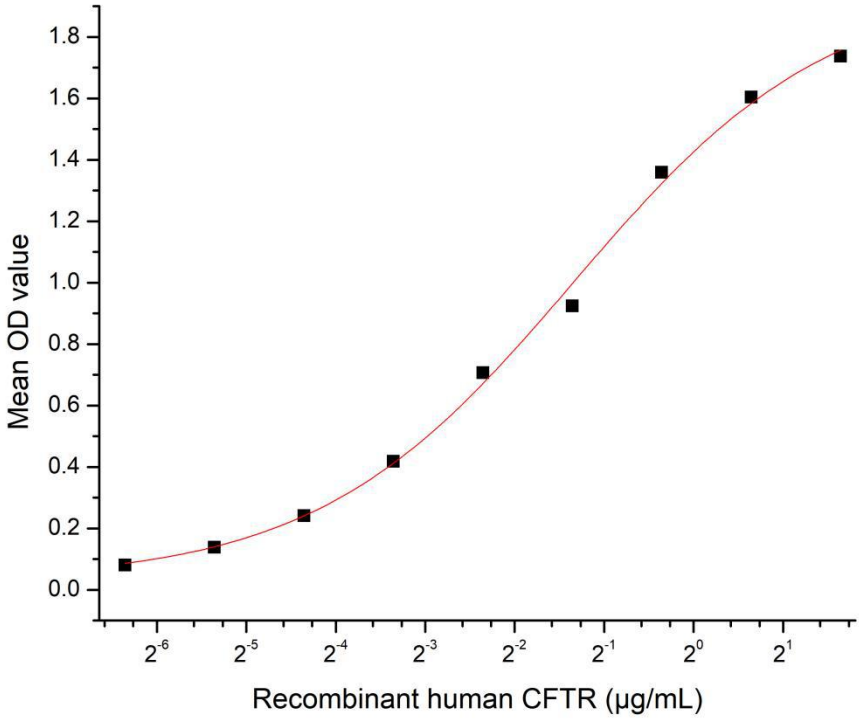



**Figure 1. The binding activity of recombinant PRES and CFTR**

## [ IDENTIFICATION ]

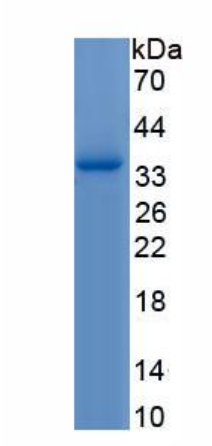



**Figure 2. SDS-PAGE**

**Sample: Active recombinant PRES, Mouse**

## [ 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.