

APF562Hu01 100µg

Active Vesicle Associated Membrane Protein 2 (VAMP2)

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: Prokaryotic expression.

Host: *E. coli*

Residues: Ser2~Thr116

Tags: N-terminal His and GST Tag

Purity: >80%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.01% skI, 5%Trehalose.

Original Concentration: 200µg/mL

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 8.5

Predicted Molecular Mass: 42.5kDa

Accurate Molecular Mass: 45kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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]

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SATAATAPP AAPAGEGGPP APPPNLTSNR RLQQTQAQVD EVVDIMRVNV  
DKVLERDQKL SELDDRADAL QAGASQFETS AAKLKRKYWW KNLKMMIILG  
VICAIILIII IVYFST
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[ACTIVITY]

VAMP2, also known as synaptobrevin-2, is a protein that in humans is a member of the vesicle-associated membrane protein (VAMP) family, which is part of the soluble N-ethylmaleimide-sensitive factor attachment protein receptor (SNARE) complex. VAMP2 is involved in the regulation of neurotransmitter release from synaptic vesicles by mediating vesicle fusion with the presynaptic membrane. It is essential for synaptic vesicle exocytosis and neurotransmitter release, playing a key role in synaptic transmission. Syntaxin 1A (STX1A) can bind to VAMP2 to form the SNARE complex, which is essential for the release of neurotransmitters. Thus a functional ELISA assay was conducted to detect the interaction of recombinant human VAMP2 and recombinant human STX1A. Briefly, STX1A was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to VAMP2-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-STX1A pAb, then aspirated and washed 3 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 L stop solution to the wells and read at 450/630nm immediately. Measured by its binding ability in a functional ELISA. When recombinant VAMP2 is immobilized at 2 μ g/mL (100 μ L well), the concentration of STX1A that produces 50% optimal

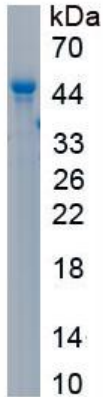


Figure 3. SDS-PAGE

Sample: Active recombinant VAMP2, 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.