APD182Hu01 100μg
Active Tachykinin 4 (TAC4)
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: Asp21~Glu113
Tags: N-terminal His-tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 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: 5.2
Predicted Molecular Mass: 13.9kDa
Accurate Molecular Mass: 18kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC 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]

DGGEEQTLSTEAETWVIVALEEGAGPSIQLQLQEVKTGKASQFFGLMGKRVG
GRPLIQPRRKKAYQLEHTFQGLLGKRSLFTEGREDEAQGSE

[ACTIVITY]

Tachykinin 4 (TAC4) , as known as ESTAC4, EK, HK-1, HK1, PPT-C, is a member of the tachykinin neuropeptide family.TAC4 protein participates in the regulation of blood pressure and is involved in processes such as the negative regulation of systemic arterial blood pressure.It is also associated with the inflammatory response and may play a role in promoting or regulating inflammation. Besides,TAC4 can initiate a series of intracellular signaling pathways by binding to receptors,such as Tachykinin Receptor 2 (TACR2) . Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human TAC4 and recombinant rat TACR2.Briefly, biotin-linked TAC4 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to TACR2-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50μl stop solution to the wells and read at 450nm immediately. The binding activity of TAC4 and TACR2 was shown in Figure 1, the EC50 for this effect is 0.40ug/mL.

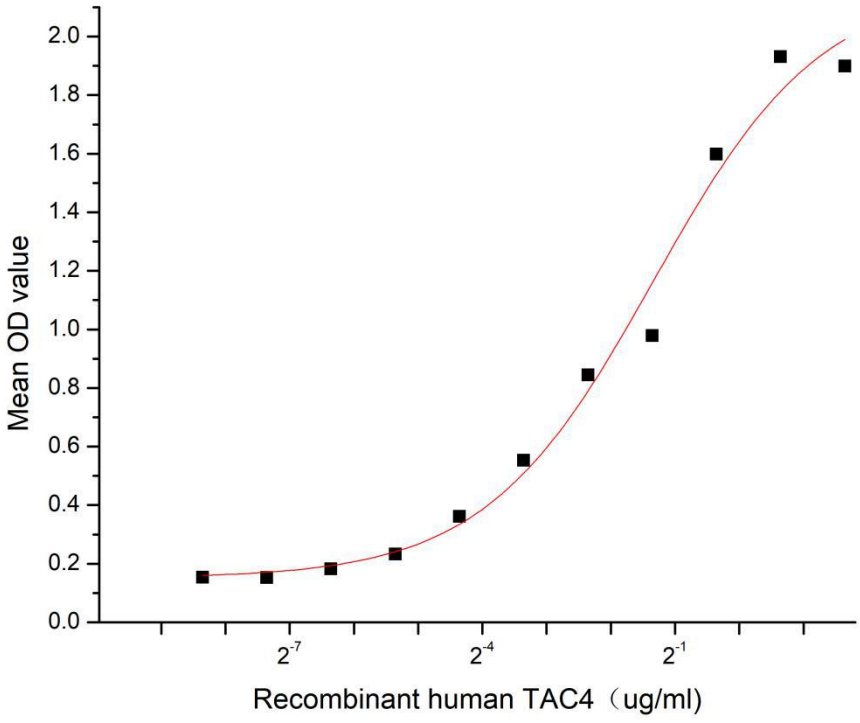

Figure 1. The binding activity of recombinant human TAC4 and recombinant rat TACR2

[IDENTIFICATION]

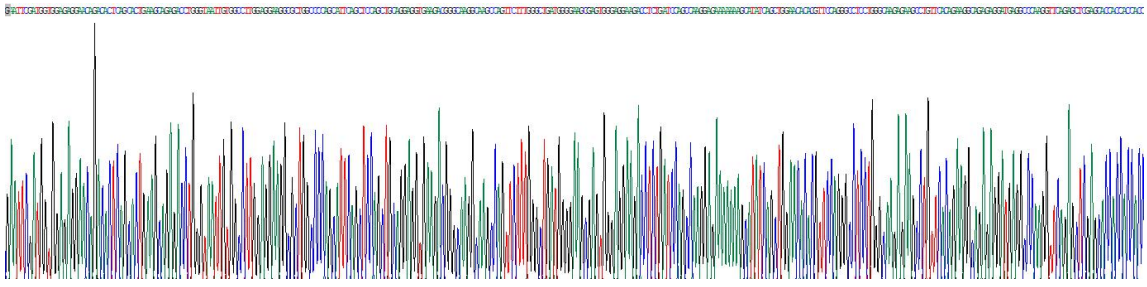

Figure 2. Gene Sequencing (extract)

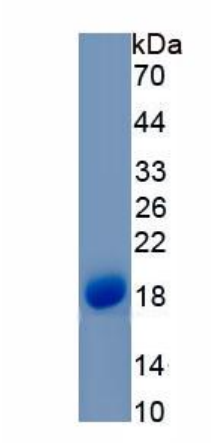

Figure 3. SDS-PAGE

Sample: Active recombinant TAC4, 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.