

APF793Hu01 100µg
Active Taste Receptor Type 1 Member 3 (TAS1R3)
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: Ala21~Leu570

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% SKL, 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: 7.0

Predicted Molecular Mass: 65.7kDa

Accurate Molecular Mass: 65kDa 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 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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APLCLSQQLR MKGDYVVLGGL FPLGEAEEAG
LRSRTRPSSP VCTRFSSNGL LWALAMKMAV EEINNKSDLL PGLRLGYDLF
DTCSEPVVAM KPSLMFLAKA GSRDIAAYCN YTQYQPRVLA VIGPHSSELA
MVTGKFFSFF LMPQVSYGAS MELLASARETF PSFFRTVPSD RVQLTAAAEEL
LQEFQWNWVA ALGSDDEYGR QGLSIFSALA AARGICIAHE GLVPLPRADD
SRLGKVQDVL HQVNQSSVQV VLLFASVHAA HALFNYSISS RLSPKVVWAS
EAWLTSDLVM GLPGMAQMGV VLGFLQRGAQ LHEFPQYVKT HLALATDPAF
CSALGEREQG LEEDVVGQRC PQDCITLQN VSAGLNHHQT FSVYAAVYSV
AQUALHNTLQC NASGCPAQDP VKPWQLLENM YNLTFHVGGGL PLRFDSSGNV
DMEYDLKLWV WQGSVPRLHD VGRFNGSLRT ERLKIRWHTS DNQKPVSRCS
RQCQEGQVRR VKGFHSCCYD CVDCEAGSYR QNPDDIACTF CGQDEWSPER
STRCFRRRSR FLAWGEPAVL
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[ACTIVITY]

Taste receptor type 1 member 3 (TAS1R3), responsible for mediating taste perception, is a G protein-coupled receptor (GPCR) expressed in gustatory cells located within the taste buds on the tongue. It can form a heterodimeric receptor with TAS1R1 to elicit the umami taste response, or it can bind with TAS1R2 to form a receptor for the sweet taste response, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human TAS1R3 and recombinant mouse TAS1R1. Briefly, biotin-linked TAS1R3 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to TAS1R1-coated microtiter wells and incubated for 1h at 37 °C . 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°C . Finally, add 50 µl stop solution to the wells and read at 450 nm immediately. The binding activity of recombinant human

TAS1R3 and recombinant mouse TAS1R1 was shown in Figure 1, the EC50 for this effect is 0.31 ug/mL.

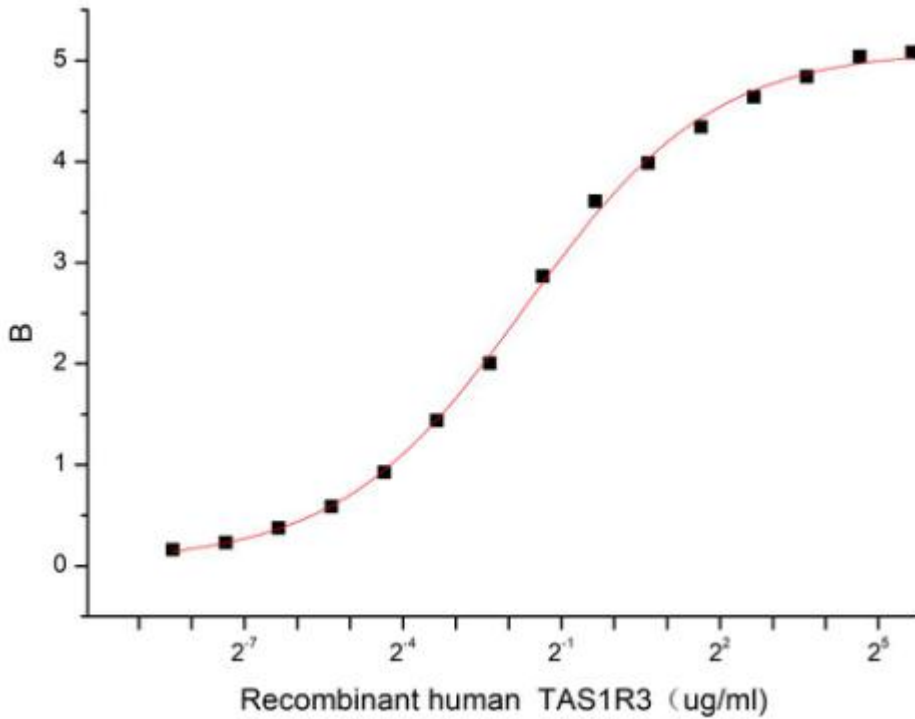


Figure 1. The binding activity of recombinant human TAS1R3 and recombinant mouse TAS1R1

[IDENTIFICATION]

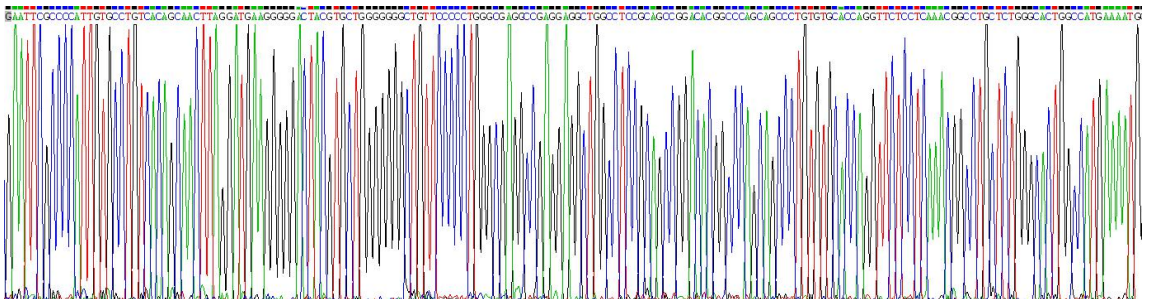


Figure 2. Gene Sequencing (extract)

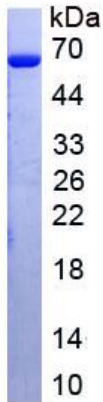


Figure 3. SDS-PAGE

Sample: Active recombinant TAS1R3, 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.