APB756Hu01 100μg
Active Transglutaminase 3, Epidermal (TGM3)
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: Ala468~Glu693
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: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 5.5
Predicted Molecular Mass: 26.3kDa
Accurate Molecular Mass: 28kDa 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]

ATS SMGLETEEQE PSIIGKLKVA GMLAVGKEVN
LVLLLKNLSR DTKTVTVNMT AWTIIYNGTL VHEVWKDSAT MSLDPEEEAE
HPIKISYAQY EKYLKSDNMI RITAVCKVPD ESEVVVERDI ILDNPTLTLE
VLNEARVRKP VNVQMLFSNP LDEPVRDCVL MVEGSGLLLG NLKIDVPTLG
PKEGSRVRFD ILPSRSGTKQ LLADFSCNKF PAIKAMLSID VAE

[ACTIVITY]

Transglutaminase 3 (TGM3), an enzyme reported to Catalyze the calcium-dependent formation of isopeptide cross-links between glutamine and lysine residues in various proteins and the conjugation of polyamines to proteins, is widely expressed in the small intestine, brain, skin, and mucosa . TGM3 is mainly expressed in the suprabasal layers of the stratified squamous epithelium, and responsible for the formation and assembly of protein aggregates in the epidermis, so it is also called “epidermal TGM” . It plays a role in various biological processes including cell growth, differentiation, and apoptosis.Besides,Caspase 14 (CASP14) has been identified as an interactor of TGM3, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant humant TGM3 and recombinant rat CASP14. Briefly,TGM3 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to CASP14-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-TGM3 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. The binding activity of recombinant humant TGM3 and recombinant rat CASP14 was shown in Figure 1, the EC50 for this effect is 0.072ug/mL.

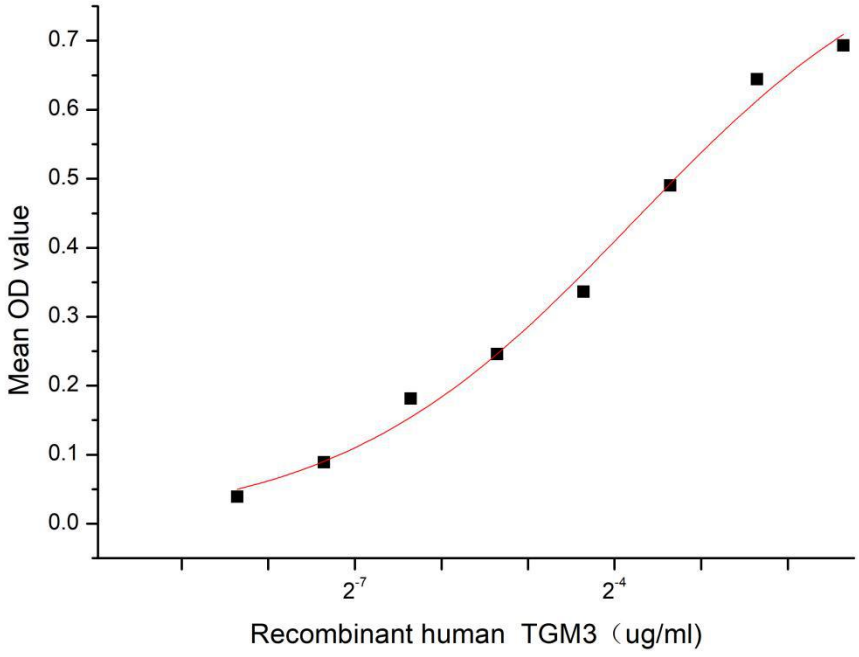

Figure 1. The binding activity of recombinant human TGM3 and rat CASP14

[IDENTIFICATION]

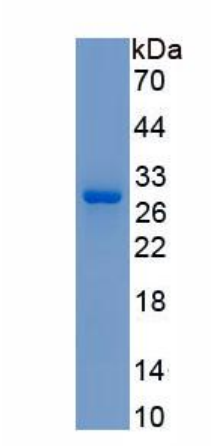

Figure 2. SDS-PAGE

Sample: Active recombinant TGM3, 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.