APH501Hu01 100μg
Active O-Linked-N-Acetylglucosamine Transferase (OGT)
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: Ala771~Ala1046
Tags: N-terminal His-tag
Purity: >90%
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: 7.4
Predicted Molecular Mass: 34.6kDa
Accurate Molecular Mass: 35kDa 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]

ALNMPVIPMNTIAEAVIEMINRGQIQITINGFSISNGLATTQINNKAATGEEVPRTIIVTTRSQY
GLPEDAIVYCNFNQLYKIDPSTLQMWANILKRVPNSVLWLLRFPAVGEPNIQQYAQNMGLP
QNRIIFSPVAPKEEHVRRGQLADVCLDTPLCNGHTTGMDVLWAGTPMVTMPGETLASRVA
ASQLTCLGCLELIAKNRQEYEDIAVKLGTDLEYLKKVRGKVWKQRISSPLFNTKQYTMELERLY
LQMWEHYAAGNKPDHMIKPVEVTESA

[ACTIVITY]

O-Linked-N-Acetylglucosamine Transferase (OGT) is a key enzyme that catalyzes the addition of N-acetylglucosamine (O-GlcNAc) to serine or threonine residues of target proteins via O-glycosylation. This post-translational modification plays a critical role in cellular processes such as signal transduction, transcription regulation, and stress response. OGT is highly conserved across species and is essential for cell viability. Dysregulation of OGT activity has been linked to metabolic disorders, neurodegenerative diseases, and cancer. The enzyme's ability to modulate protein function dynamically, akin to phosphorylation, highlights its importance in maintaining cellular homeostasis.Besides,Ubiquitin Associated Protein 1 (UBAP1) has been identified as an interactor of OGT, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human OGT and recombinant human UBAP1 . Briefly, biotin-linked OGT were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to UBAP1-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 recombinant human OGT and recombinant human UBAP1 was shown in Figure 1, the EC50 for this effect is 0.21μg/mL.

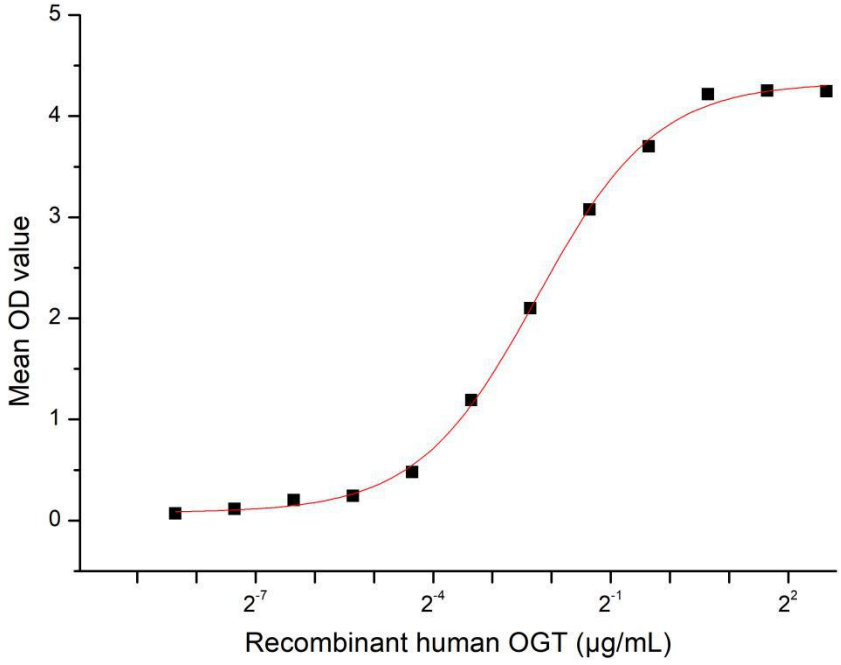

Figure 1. The binding activity of recombinant human OGT and recombinant human UBAP1

[IDENTIFICATION]

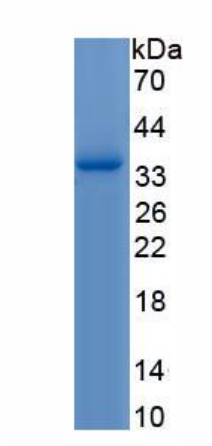

Figure 2. SDS-PAGE

Sample: Active recombinant OGT, 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.