APA431Hu01 100μg
Active Granzyme M (GZMM)
Organism Species: Homo sapiens (Human)
Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1th Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Ile26~Ala257
Tags: N-terminal His-tag
Purity: >92%
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.
Applications: Cell culture; Activity Assays; In vivo assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 10.3
Predicted Molecular Mass: 26.3kDa
Accurate Molecular Mass: 26kDa 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^{o}C for one month.
Aliquot and store at -80^{o}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 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]

IIGGR EVIPHSRPYM ASLQRNGSHL CGGVLVHPKW VLTAAHCLAQ RMAQLRLVLG LHTLDSPGLT FHIKAAIQHP RYKPVPALEN DLALLQLDGK VKPSRTIRPL ALPSKRQVVA AGTRCSMAGW GLTHQGGRLS RVLRELDLQV LDTRMCNNSR FWNGSLSPSM VCLAADSKDQ APCKGDSGGP LVCGKGRVLA RVLSFSSRVC TDIFKPPVAT AVAPYVSWIR KVTGRSA

[ACTIVITY]

GZMM (Granzyme M) is one of the neutral serine proteases, which is specifically expressed by NK cells and mediates a novel major and perforin-dependent cell death pathway. Granzyme M has been proven to targets α-Tubulin and disorganizes the microtubule network, besides, Ezrin has also been identified as a substrate of GZMM. Therefore, a catalytic assay was conducted to detect the protease activity of recombinant human GZMM using Hela cells lysates. Briefly, protein lysates were extracted from 2×10^7 Hela cells using Lysis Buffer, then incubated with normal or inactivated GZMM in 37ºC for 4h. Samples were immunoblotted using Abs β-actin as control, and Ezrin to detect the enzyme activity. The results were shown below. It is obvious that recombinant human GZMM cleaved Ezrin.

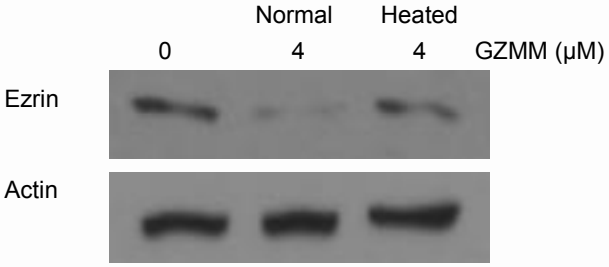

Figure 1. GZMM cleaves Ezrin

[IDENTIFICATION]

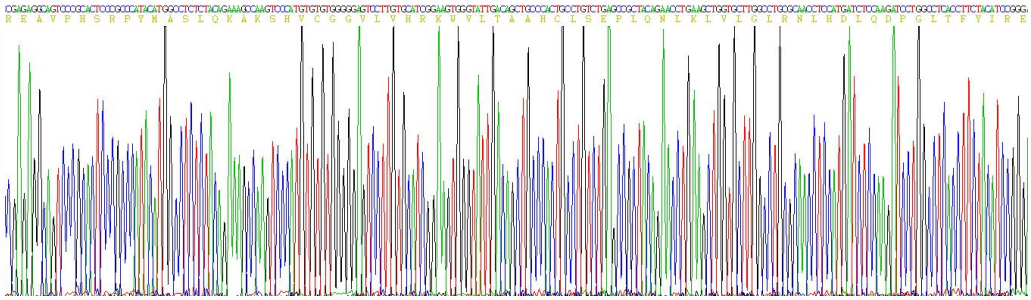

Figure 2. Gene Sequencing (extract)

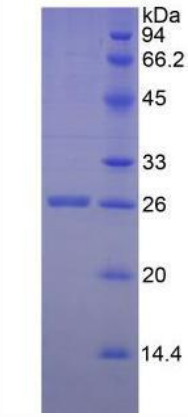

Figure 3. SDS-PAGE

Sample: Active recombinant GZMM, Human

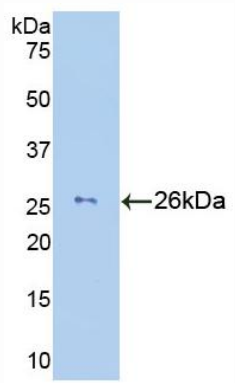

Figure 4. Western Blot

Sample: Recombinant GZMM, Human;

Antibody: Rabbit Anti-Human GZMM Ab (PAA431Hu01)