

APB217Hu61 100µg
Active Hyaluronidase (HAase)
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: Eukaryotic expression.

Host: 293F cell

Residues: Phe22~Trp435

Tags: N-terminal His-tag

Purity: >90%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 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: 6.9

Predicted Molecular Mass: 47.6kDa

Accurate Molecular Mass: 50kDa 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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FRGPLLPNRPFTTWNANTQWCLERHGVVDVSVFDVVANPGQTFRGPDMTIFYSSQLGTYPYYTPTGEPV
FGGLPQNASLIAHLARTFQDILAAIPAPDFSGLAVIDWEAWRPRWAFNWDTKDIYRQRSRALVQAQHPDWP
APQVEAVAQDQFQGAARAWMAGTLQLGRALRPRGLWGFYGFPCYNYDFLSPNYTGQCPSGIRAQNDQLGW
LWGQSRALYPSIYMPAVLEGTGKSQMYVQHRVAEAFRVAVAAGDPNLPVLPYVQIFDYDTTNHFLPLDELEH
SLGESAAQGAAGVVLWVSWENTRTKESQAIKEYMDTTLGPFILNVTSGALLCSQALCSGHGRCVRRRTSHP
KALLLNPAFSIQLTPGGGPLSLRGALSLEDQAQMAVEFKCRCYPGWQAPWCERKSMW
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[ACTIVITY]

Hyaluronidase (HAase) is a general term for enzymes that can hydrolyze hyaluronic acid. It is an enzyme that can reduce the activity of hyaluronic acid in the body, thereby improving the fluid permeability in tissues. When used in the human body, it can temporarily reduce the viscosity of the intercellular matrix, promote subcutaneous infusion, locally accumulated exudate or blood to accelerate diffusion and facilitate absorption, and is an important drug dispersant. Clinically used as a drug penetrating agent to promote drug absorption, promote local edema or hematoma dissipation after surgery and trauma. Human HAase consists of 435 amino acids which contains a signal peptide of 1-21 amino acids and it shares 74% and 75% amino acid sequence homology with mouse and rat respectively. The activity assay of recombinant human HAase was measured by its ability to hydrolyze the substrate hyaluronic acid. The rhHAase was diluted to 0.5 ug/ml in 8.46 mM NaH₂PO₄, 11.54 mM Na₂HPO₄, 77 mM NaCl, 0.1 mg/ml BSA, pH 7. 50 ul 0.5 ug/ml rhHAase was added into the microplate and start the reaction by adding 50 µL of 0.3 mg/ml substrate which was diluted in 300mM NaH₂PO₄, pH 5.35. Incubated at 37 ° C for 5min and add 50 ul reaction mixture to 250 ul 1 mg/ml BSA in 24 mM sodium acetic, 79 mM acetic acid, pH 3.75. Incubated at room temperature for 10min and read at a wavelength of 600 nm. The specific activity of recombinant human HAase is >30 pmol/min/µg.

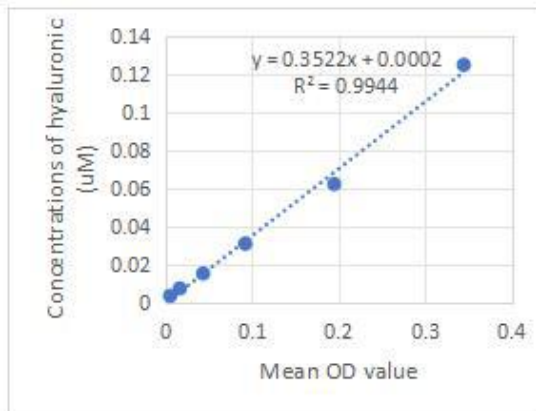


Figure 1. The standard curve of hyaluronic acid

OD600	hyaluronic acid (uM)
0.3439	0.125
0.1946	0.0625
0.092	0.03125
0.0435	0.015625
0.0166	0.0078125
0.0054	0.00390625

One unit of enzyme activity is defined as the 1 µg of enzyme required to convert 1 pmol of hyaluronic acid in 1min.

$$\text{Specific Activity (pmol/min/}\mu\text{g)} = \frac{\Delta OD * F}{T * N}$$

ΔOD=Adjusted for Substrate Blank

F=Conversion Factor (convert from standard curve of hyaluronic acid)

T= Time

[IDENTIFICATION]

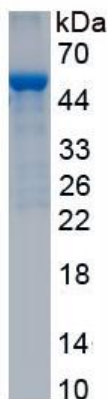


Figure 2. SDS-PAGE

Sample: Active recombinant HAase, 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.