

APA017Hu62 100µg

Active E-cadherin

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: Asp155~Ile707

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: 4.0

Predicted Molecular Mass: 62.0kDa

Accurate Molecular Mass: 72kDa as determined by SDS-PAGE reducing conditions.

Phenomenon explanation:

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[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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DWVIPP  ISCPENEKGP  FPKNLVQIKS  NKDKEGKVFY  SITQGADTP
PVGVFIIERE  TGWLKVTEPL  DRERIATYTL  FSHAVSSNGN  AVEDPMEILI
TVTDAQNDNKP  EFTQEVFKGS  VMEGALPGTS  VMEVTATDAD  DDVNTYNAAI
AYTILSQDPE  LPDKNMFTIN  RNTGVISVVT  TGLDRESFPT  YTLVVQAADL
QGEGLSTTAT  AVITVTDND  NPPIFNPTY  KGQVPENEAN  VVITTLKVTD
ADAPNTPAWE  AVYIILNDDG  GQFVVTNPV  NNDGILKTAK  GLDFEAKQQY
ILHVAVTNVV  PFEVSLTST  ATVTVDVLDV  NEAPIFVPPE  KRVEVSEDFG
VGQEITSYTA  QEPDTFMEQK  ITYRIWRDTA  NWLEINPDTG  AISTRAELDR
EDFEHVKNST  YTALIIATDN  GSPVATGTGT  LLLILSDVND  NAPIPEPRTI
FFCERNPKPQ  VINIIDADLP  PNTSPFTAEL  THGASANWTI  QYNDPTQESI
ILKPKMALEV  GDYKINLKLM  DNQNKDQVTT  LEVSVCDCEG  AAGVCRKAQP
VEAGLQI
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[ACTIVITY]

E-Cadherin, also known as Uvomorulin in the mouse and rat, is a 120 kDa member of the Cadherin family of cell surface glycoproteins that mediate cell adhesion. Human E-Cadherin shares 81% amino acid sequence identity with the rat and mouse proteins. It is a single-pass transmembrane protein that mediates calcium-dependent epithelial cell adhesion. As E-cadherin has the function of cell adhesion, we measure the activity of recombinant human E-cadherin by the ability

of the immobilized protein to support the adhesion of MCF7 human breast cancer cells. When 5×10^4 cells/well are added to different concentrations of recombinant human E-cadherin coated plates, cells will adhere after 2 hour incubation at 37°C . The adhesion of MCF7 after 2 hour incubation at 37°C observed by inverted microscope was shown in Figure 1. Cell adherent was in a dose dependent manner, the result was shown in Figure 2, the EC50 was 0.23 $\mu\text{g/ml}$.

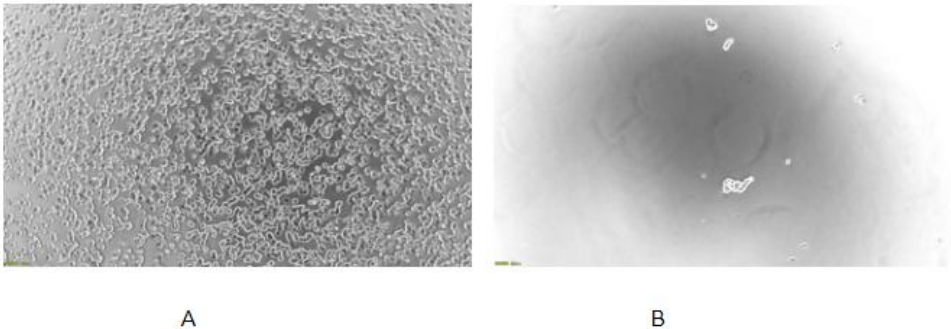


Figure 1. The adhere effect of recombinant human E-cadherin on MCF7 cells

(A) MCF7 cells were seeded into the well containing E-cadherin 0.3 $\mu\text{g/ml}$ and incubated for 2 h at 37°C ;

(B) MCF7 cells were seeded into the well without E-cadherin and incubated for 2 h at 37°C ;

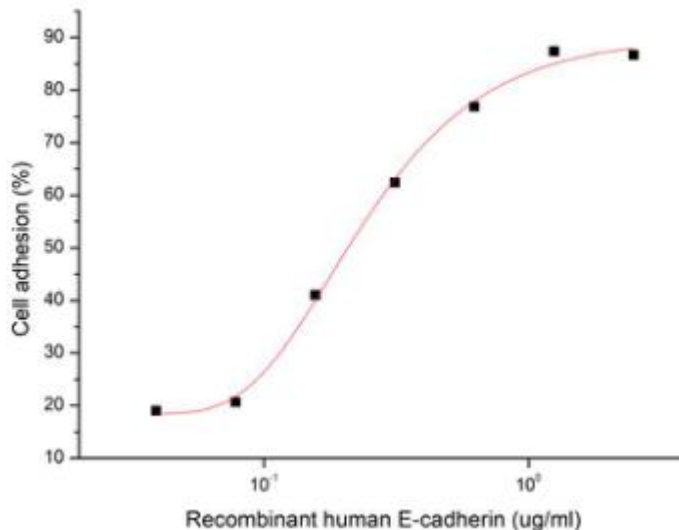


Figure 2. The adhere effect of E-cadherin on MCF7 cells

[IDENTIFICATION]

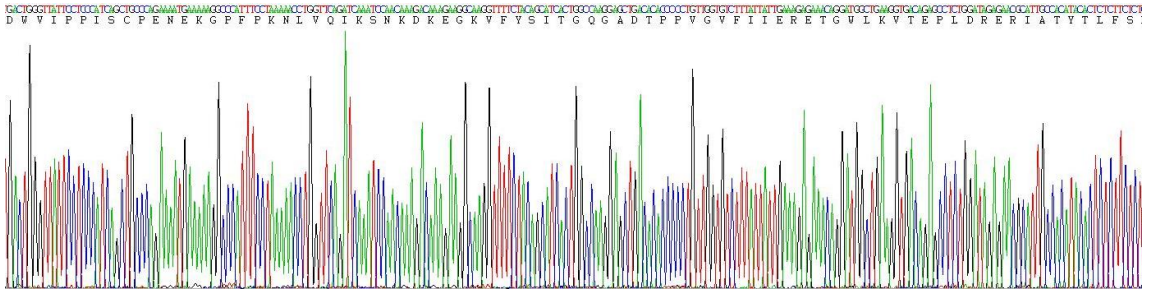


Figure 3. Gene Sequencing (extract)

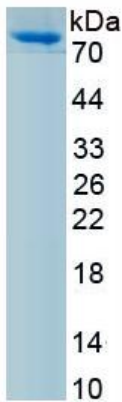


Figure 4. SDS-PAGE

Sample: Active recombinant E-cadherin, 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.