APC288Hu61 100μg
Active Allograft inflammatory factor 1 (AIF1)
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: Met1~Pro147
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: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 6.0
Predicted Molecular Mass: 18.3kDa
Accurate Molecular Mass: 20kDa 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 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]

MSQTRDLQGG KAFGLLKAQQ EERLDEINKQ FLDDPKYSSD EDLPSKLEGF
KEKYMEFDLN GNGDIDIMSL KRMLEKLGVP KTHLELKKLI GEVSSGSGET
FSYPDFLRMM LGKRSAILKM ILMYEEKARE KEKPTGPPAK KAISELP

[ACTIVITY]

Lonized Calcium-binding Adapter Molecule 1 (IBA1), a 17-kDa EF-hand calcium-binding protein, serves as a gold-standard marker for microglia in the central nervous system (CNS). Predominantly expressed in microglia and marginally in peripheral macrophages, it mediates calcium-dependent cytoskeletal reorganization, governing microglial migration, phagocytosis of damaged neurons, and pro-inflammatory cytokine secretion. This protein is pivotal for CNS immune surveillance and homeostasis; its elevated expression is tightly linked to microglial activation in neuroinflammatory conditions and neurodegenerative diseases such as multiple sclerosis and amyotrophic lateral sclerosis. Additionally, IBA1 coordinates with actin-regulatory proteins to modulate microglial morphological transitions during immune responses. IBA1 interacts with ARPC4 to facilitate actin polymerization and modulate microglial migratory capacity in neuroinflammation.Thus a functional ELISA assay was conducted to detect the interaction of recombinant IBA1 and recombinant ARPC4. Briefly, IBA1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to ARPC4-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-IBA1 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 IBA1 and recombinant ARPC4 was shown in Figure 1, the EC50 for

this effect is 17.38μg/mL.

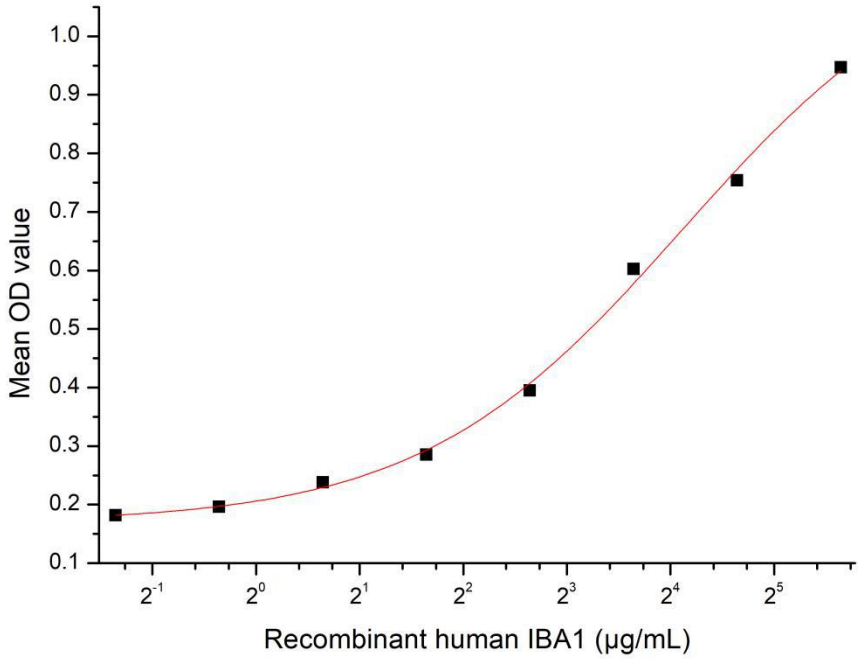

Figure 1. The binding activity of recombinant IBA1 and ARPC4

[IDENTIFICATION]

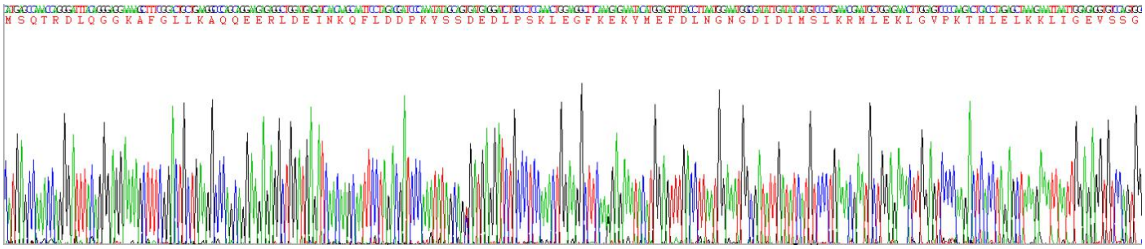

Figure 2. Gene Sequencing (extract)

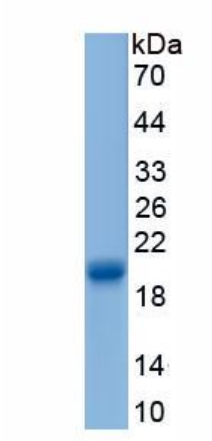

Figure 3. SDS-PAGE

Sample: Active recombinant AIF1, 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.