APB547Hu01 100μg
Active Indoleamine-2,3-Dioxygenase (IDO)
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: Ala2~Gly403
Tags: N-terminal His-tag
Purity: >98%
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: 6.8
Predicted Molecular Mass: 46.7kDa
Accurate Molecular Mass: 43kDa 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 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°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]

AHAMENSWT ISKEYHIDEE VGFALPNPQE NLPDFYNDWM FIAKHLPDLI
ESGQLRERVE KLNMLSIDHL TDHKSQRLAR LVLGCITMAY VWGKGHGDVR
KVLPRNIAVP YCQLSKKLEL PPILVYADCV LANWKKKDPN KPLTYENMDV
LFSFRDGDCS KGFFLVSLLV EIAAASAIKV IPTVFKAMQM QERDTLLKAL
LEIASCLEKA LQVFHQIHDH VNPKAFFSVL RIYLSGWKGN PQLSDGLVYE
GFWEDPKEFA GGSAGQSSVF QCFDVLLGIQ QTAGGGHAAQ FLQDMRRYMP
PAHRNFLCSL ESNPSVREFV LSKGDAGLRE AYDACVKALV SLRSYHLQIV
TKYILIPASQ QPKENKTSED PSKLEAKGTG GTDLMNFLKT VRSTTEKSLL
KEG

[ACTIVITY]

IDO (Indoleamine 2,3-dioxygenase 1) is a heme enzyme that catalyzes the first and rate-limiting step in tryptophan catabolism to N-formyl-kynurenine. This enzyme acts on multiple tryptophan substrates including D-tryptophan, L-tryptophan, 5-hydroxy-tryptophan, tryptamine, and serotonin. Thus, bioactivity of recombinant human IDO was measured through its ability to oxidize L-tryptophan

to N-formyl-kynurenine, using Methylene Blue as indicator. Briefly, a mixture of 800μM L-tryptophan, 9000 units/mL catalase, and 40μM Methyene Blue with the addition of 80mM ascorbic acid reaction buffer was incubated with different concentrations of IDO, and the absorbance was read in 321nm every 1.5h. The result indicated that recombinant human IDO oxidize L-tryptophan.

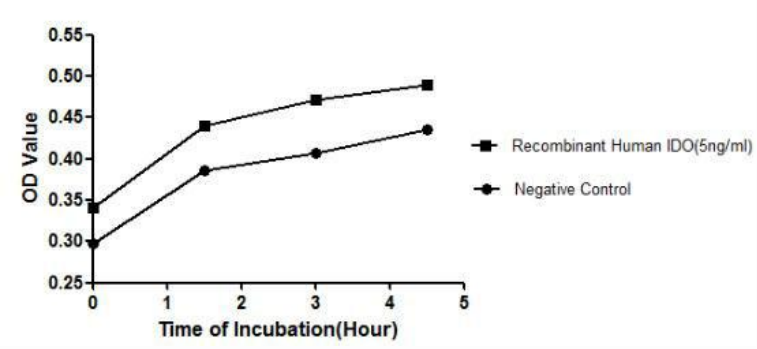

Figure 1. Enzyme activity of recombinant human IDO.

[IDENTIFICATION]

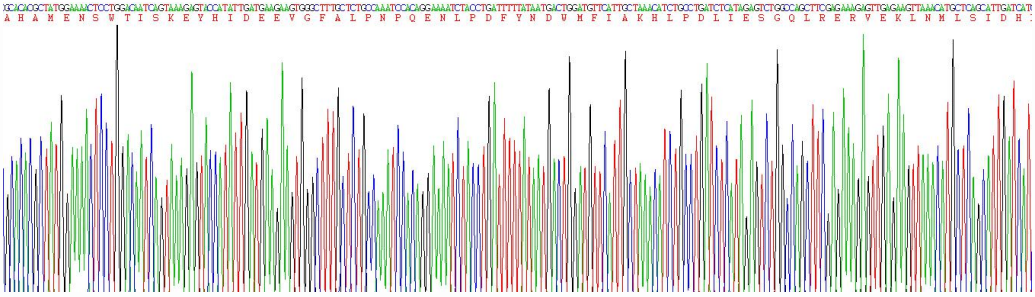

Figure 2. Gene Sequencing (extract)

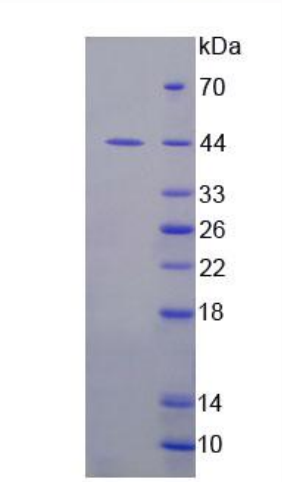

Figure 3. SDS-PAGE

Sample: Active recombinant IDO, Human

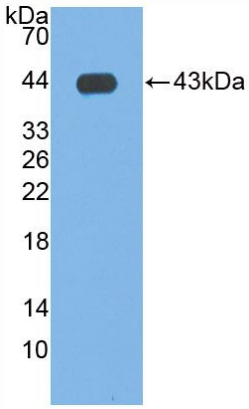

Figure 4. Western Blot

Sample: Recombinant IDO, Human;

Antibody: Rabbit Anti-Human IDO Ab (PAB547Hu01)