

**APB354Hu01 100µg**  
**Active Aryl Hydrocarbon Receptor (AhR)**  
**Organism Species: *Homo sapiens* (Human)**  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Val128~Asn399

**Tags:** N-terminal His-tag

**Purity:** >90%

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

**Buffer Formulation:** PBS, pH7.4, containing 0.01% SKL, 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:** 8.1

**Predicted Molecular Mass:** 32.2kDa

**Accurate Molecular Mass:** 34kDa 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.

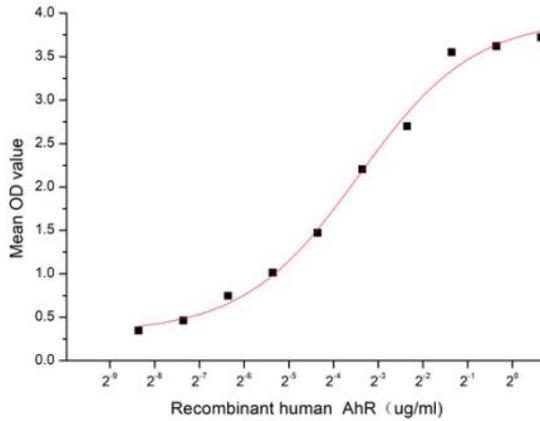
## [ **SEQUENCE** ]

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VVT TDALV FYASS TIQDY LGFQQ
SDVIHQSVYE LIHTEDRAEF QRQLHWALNP SQCTESGQGI EEATGLPQTV
VCYNPDQIPP ENSPLMERC F ICRLRCLLDN SSGFLAMNFQ GKLKYLHGQK
KKGKDGSI LP PQLALFAIAT PLQPPSILEI RTKNFIFRTK HKLDFPTIGC
DAKGRIVLGY TEAELCTRGS GYQFIHAADM LYCAESHIRM IKTGESGMIV
FRLLTKNNRW TWVQSNARLL YKNGRPDYII VTQRPLTDEE GTEHLRKRN
```

## [ **ACTIVITY** ]

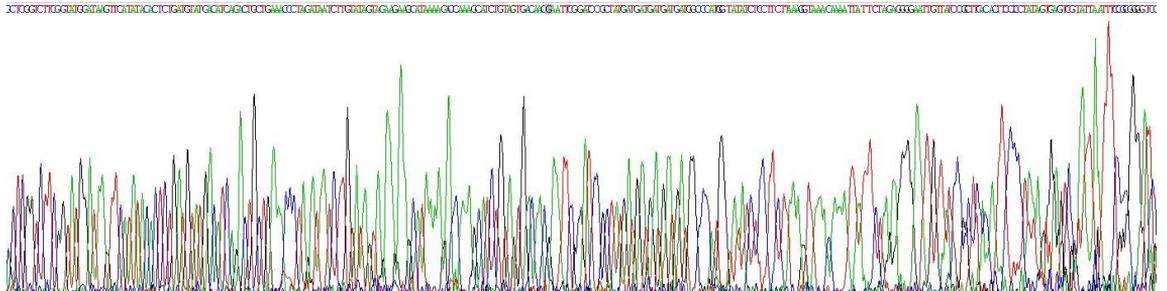
Aryl Hydrocarbon Receptor (AhR), also known as bHLHE76, is a 110 kDa member of the bHLH/PAS transcription factor family. It is widely expressed (breast, lung, liver), and serves many functions. It is a ligand-activated transcription factor best known for its role in sensing xenobiotics and regulating the expression of genes involved in xenobiotic metabolism, including drug transporters and drug metabolizing enzymes. Heat Shock Protein 90kDa Alpha A1 (HSP90aA1) has been identified as an interactor of AhR, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human AhR and recombinant human HSP90aA1. Briefly, AhR were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to HSP90aA1-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-AhR pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50 µL stop solution to the wells and read at 450 nm immediately. The binding activity of AhR and HSP90aA1 was shown in Figure

1, and this effect was in a dose dependent manner, the EC50 for this effect is 0.09 ug/mL.

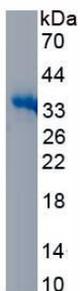


**Figure 1. The binding activity of recombinant human AhR and recombinant human HSP90aA1**

## [ IDENTIFICATION ]



**Figure 2. Gene Sequencing (extract)**



**Figure 3. SDS-PAGE**

**Sample: Active recombinant AhR, 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.