

**APB354Mu01 100µg**  
**Active Aryl Hydrocarbon Receptor (AhR)**  
**Organism Species: *Mus musculus* (Mouse)**  
***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:** Val126~Gly385

**Tags:** N-terminal His and GST Tag

**Purity:** >80%

**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:** Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

**Predicted isoelectric point:** 7.8

**Predicted Molecular Mass:** 59.5kDa

**Accurate Molecular Mass:** 59kDa 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 ]

```
VVTAD ALVFYASSTI QDYLGFGQSD
VIHQSVYELI HTEDRAEFQR QLHWALNPDS AQGVDEAHGP PQAAYVYTPD
QLPPENASFM ERCFRCLRC LLDNSSGFLA MNFQGRLLKYL HGQNKKGKDG
ALLPPQLALF AIATPLQPPS ILEIRTKNFI FRTKHKLDFT PIGCDAKGQL
ILGYTEVELC TRGSGYQFIH AADMLHCAES HIRMIKTGES GMTVFRLFAK
HSRWRWVQSN ARLIYRNGRP DYIIATQRPL TDEEG
```

## [ ACTIVITY ]

Aryl Hydrocarbon Receptor (AhR), a protein of substantial molecular mass, typically ranging from 110 to 150 kilodaltons, is a member of the esteemed Basic Helix-loop-helix PAS (Per-Arnt-Sim) family of transcription factors. Ubiquitously expressed in vertebrate cells, AhR's activity is meticulously modulated by a variety of ligands. This receptor is pivotal in orchestrating gene transcription, thereby wielding considerable influence over a multitude of biological processes. Aryl Hydrocarbon Receptor Interacting Protein (AIP) can combine with AHR to regulate the endocrine system. Thus a functional ELISA assay was conducted to detect the interaction of recombinant recombinant mouse AhR and recombinant human AIP. Briefly, AhR was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to AIP-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 for 1h at 37°C, 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  $\mu$ L stop solution to the wells and read at 450/630nm

immediately. The binding activity of recombinant mouse AhR and recombinant human AIP was shown in Figure 1, the EC50 for this effect is 0.49ug/mL.

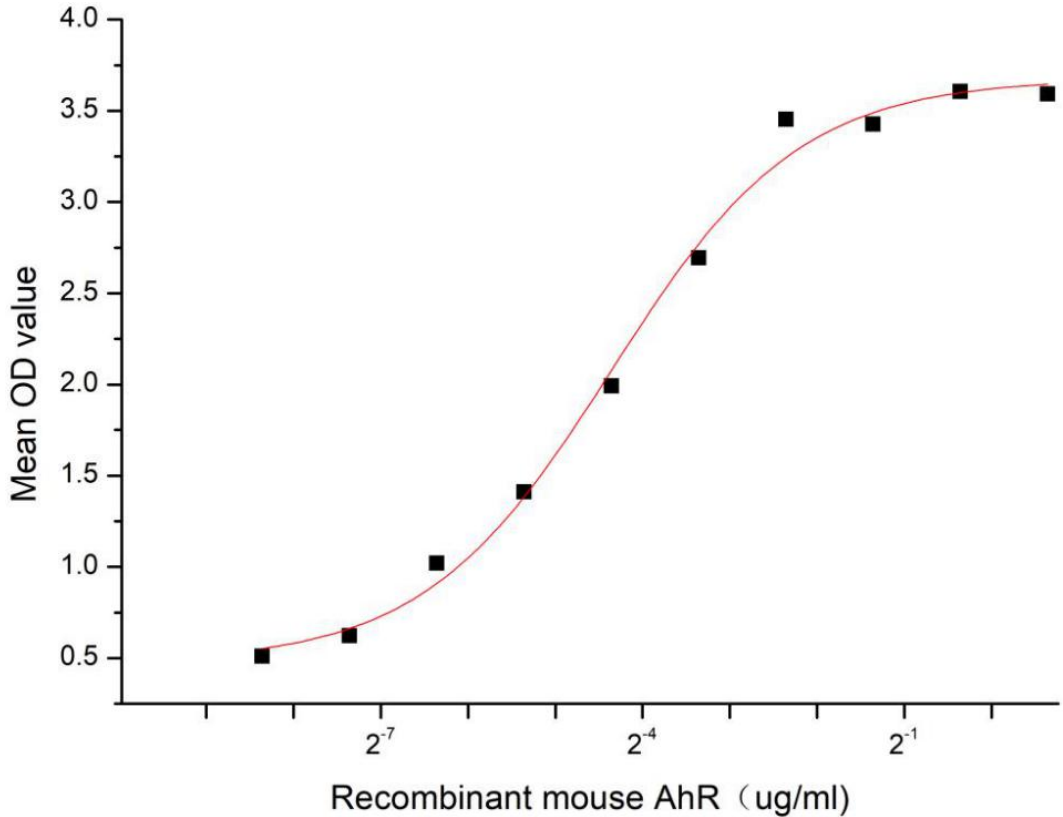


Figure 1. The binding activity of recombinant mouse AhR and recombinant human AIP

**[ IDENTIFICATION ]**

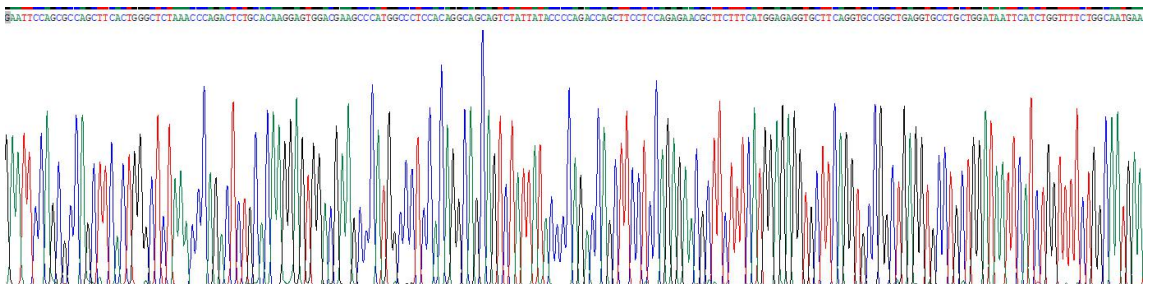
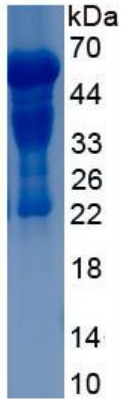


Figure 2. Gene Sequencing (extract)



**Figure 3. SDS-PAGE**

**Sample: Active recombinant AhR, Mouse**

**[ 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.