

**APC034Hu62 50µg**  
**Active Growth Differentiation Factor 15 (GDF15)**  
**Organism Species: *Homo sapiens (Human)***  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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1st Edition (Apr, 2016)

## **[ PROPERTIES ]**

**Source:** Eukaryotic expression.

**Host:** 293F cell

**Residues:** Ala195~Ile308

**Tags:** Two N-terminal Tags, His-tag and SUMO-tag

**Purity:** >95%

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

**Buffer Formulation:** PBS, pH7.4, containing 5% trehalose.

**Original Concentration:** 50µg/mL

**Applications:** Cell culture; Activity Assays.

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

**Predicted isoelectric point:** 7.9

**Predicted Molecular Mass:** 25.3kDa

**Accurate Molecular Mass:** 30kDa as determined by SDS-PAGE reducing conditions.

## **[ USAGE ]**

Reconstitute in ddH<sub>2</sub>O to a concentration of 0.1-0.4 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 ]**

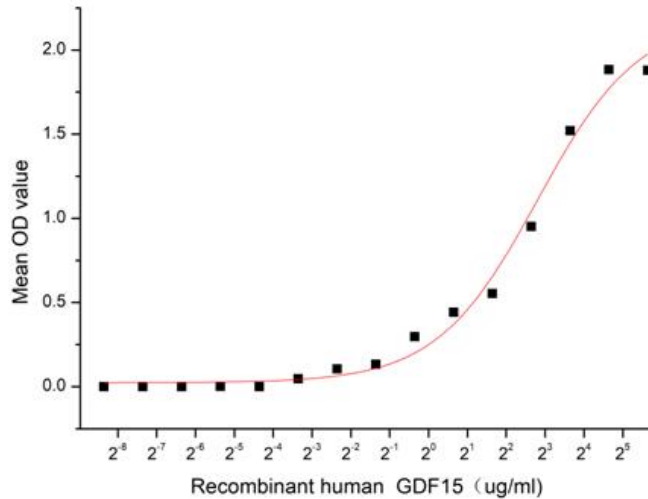
ARARNG

DHCPLGPGRC CRLHTVRASL EDLGWADWVL SPREVQVTMC IGACPSQFRA  
ANMHAQIKTS LHRLKPDTVP APCCVPASYN PMVLIQKTDI GVSLQTYDDL  
LAKDCHCI

## **[ ACTIVITY ]**

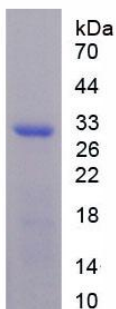
Growth Differentiation Factor 15 (GDF-15), also called Macrophage Inhibitory Cytokine 1 (MIC-1), is a divergent member of the Transforming Growth Factor beta (TGF-beta ) superfamily. Human GDF-15 shares 66% and 68% amino acid sequence identity with the rat and mouse proteins, respectively. GDF-15 is highly expressed in placenta and brain, and it is expressed at lower levels in kidney, pancreas, prostate, and colon. Similar to other TGF-beta family proteins, GDF-15 is synthesized as a large precursor protein that is cleaved at a dibasic cleavage site (RxxR) to release the mature protein. Biologically active GDF-15 is a disulfide-linked homodimer of the mature protein. GDF-15 has been shown to have various functions, including inhibition of Tumor Necrosis Factor alpha (TNF-alpha ) production from lipopolysaccharide-stimulated macrophages and the induction of cartilage formation. A functional ELISA assay was conducted to detect the interaction of recombinant human GDF-15 and recombinant human Transforming Growth Factor Beta Receptor II (TGFbR2). Briefly, biotin-linked GDF-15 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to TGFbR2-coated microtiter wells and incubated for 1h at 37 °C . Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then 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 nm immediately. The binding activity of GDF-15 and TGFbR2 was shown in Figure 1, the EC50 for this effect is 7.002  $\mu$ g/mL.



**Figure 1. The binding activity of GDF-15 and TGFbR2**

## [ IDENTIFICATION ]



**Figure 2. SDS-PAGE**

**Sample: Active recombinant GDF15, 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.