**APB309Hu01 50μg**
**Active Pleiotrophin (PTN)**
**Organism Species: *Homo sapiens (Human)***
***Instruction manual***

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

## [ PROPERTIES ]

**Source:** Prokaryotic expression.
**Host:** *E. coli*
**Residues:** Gly33~Asp168
**Tags:** N-terminal His-tag
**Purity:** >95%
**Endotoxin Level:** <1.0EU per 1μg (determined by the LAL method).
**Buffer Formulation:** PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.
**Original Concentration:** 500μg/mL
**Applications:** Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
**Predicted isoelectric point:** 9.6
**Predicted Molecular Mass:** 16.4kDa
**Accurate Molecular Mass:** 18kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC 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 ]

GKKEKPEK KVKKSDCGEW
QWSVCVPTSG DCGLGTREGT RTGAECKQTM KTQRCKIPCN WKKQFGAECK
YQFQAWGECD LNTALKTRTG SLKRALHNAE CQKTVTISKP CGKLTKPKPQ
AESKKKKKEG KKQEKMLD

## [ ACTIVITY ]

Pleiotrophin (PTN) is a 136 amino acid secreted heparin-binding cytokine that signals diverse functions, including lineage-specific differentiation of glial progenitor cells, neurite outgrowth, and angiogenesis. A considerable amount of research has been carried out to understand the mechanisms by which PTN regulates these events. PTN has now been shown to bind a diverse collection of receptors including Syndecan 1 (SDC1). A functional binding ELISA assay was conducted to detect the interaction of recombinant human PTN and recombinant human SDC1. Briefly, PTN were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to SDC1-coated (2 ug/ml, 100 ul/well) microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with PTN 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℃. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding activity of recombinant human PTN and recombinant human SDC1 was shown in Figure 1, the EC50 was 3.47 ug/ml.

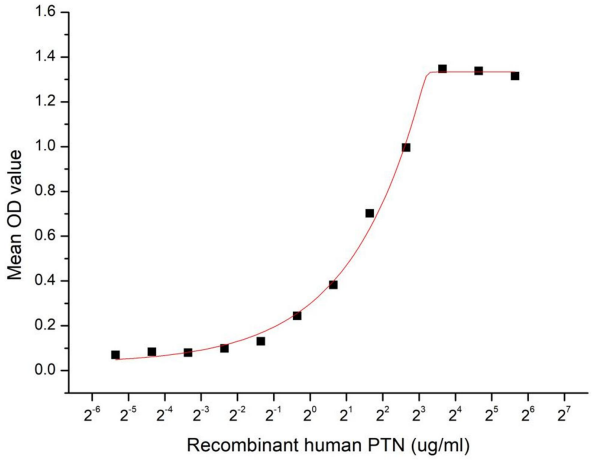


**Figure 1. The binding activity of PTN and SDC1**

## [ IDENTIFICATION ]

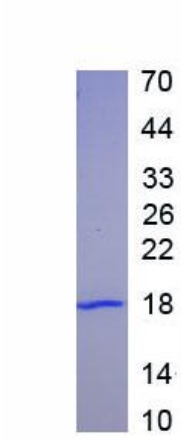


**Figure 2. SDS-PAGE**

**Sample: Active recombinant PTN, 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.