

APH350Hu01 100µg
Active Pro-Melanin Concentrating Hormone (PMCH)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Ile22~Val165

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% Sarcosyl, 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: 6.5

Predicted Molecular Mass: 20.0kDa

Accurate Molecular Mass: 23kDa 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]

ILLSASKSIRNLDDDMVFNTFRLGKGFQKEDTAEKSVIAPSLEQYKNDESSFMNEEENKVSKN TG
SKHNFLNHGLPLNLAIKPYLALKGSAFPAENG VQNTTESTQEKREIGDEENSAKFPIGRRDFDML
RCMLGRVYRPCWQV

[ACTIVITY]

Pro-MCH (PMCH), short for Pro-melanin-concentrating hormone, is a precursor protein and it can be cleaved and processed to produce melanin-concentrating hormone, a neuropeptide involved in the regulation of various physiological processes like appetite, sleep-wake cycles and energy balance in organisms. In addition, Pro-MCH and its derivative MCH are also involved in the regulation of mood and stress responses, and have certain effects on the body's adaptation to environmental changes. Neuropeptide Y (NPY) has been identified as an interactor of PMCH, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant rat NPY and recombinant human PMCH. Briefly, NPY was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to PMCH-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-NPY 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 μ L stop solution to the wells and read at 450/630nm immediately. Measured by its binding ability in a functional ELISA. When Recombinant PMCH is Immobilized at 2 μ g/mL(100 μ Lwell), the concentration of NPY that produces 50% optimal binding response is found to be approximately 0.055 μ g/mL.

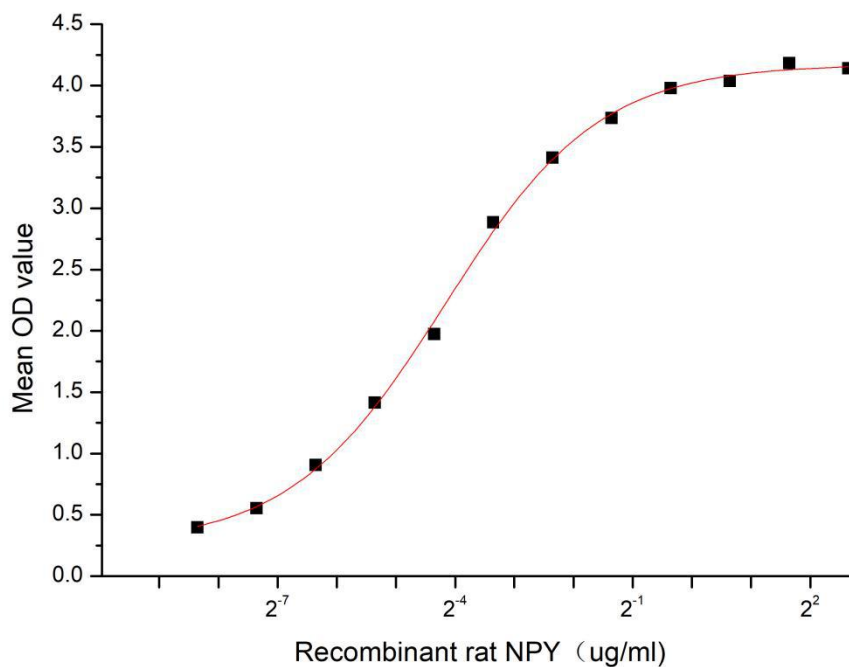


Figure 1. The binding activity of recombinant rat NPY and recombinant human PMCH

[IDENTIFICATION]

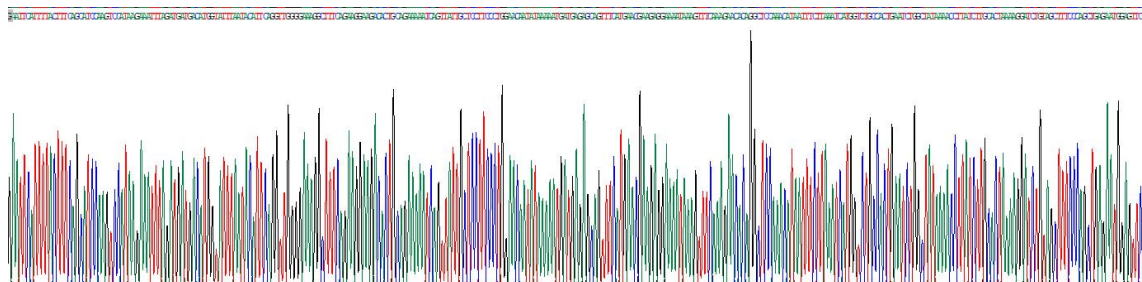


Figure 2. Gene Sequencing (extract)

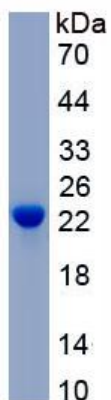


Figure 3. SDS-PAGE

Sample: Active recombinant PMCH, 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.