APA584Po62 100μg
Active Heme Oxygenase 1 (HO1)
Organism Species: ***Sus scrofa; Porcine (Pig)***
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Eukaryotic expression.
Host: 293F cell
Residues: Met1~Val265
Tags: C-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 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: 6.8
Predicted Molecular Mass: 32.1kDa
Accurate Molecular Mass: 35kDa 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 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]

MEHSQPNSMPQDLSEALKEATKEVHVQAENAEFMKNFQKGEVTREGFKLVMASLYHIYDALEE
EIEHNKENPVYTPLYFPEELHRRAALEQDMAFWYGPRWQEAIPYTQATKRYVRRLQQVGRFEP
ELLVAHAYTRYMGDLSGGQVLKKIAQKALDLPSSGEGLAFFTFPNVANATKFKQLYRSRMNTLEM
TPEVKQRVLEEAKTAFLLNIQLFEEVQELLTQDTKDQRPSQASDIRKRAGSRVQDSTPVTTPRGK
PQLSVLSQV

[ACTIVITY]

Heme Oxygenase 1 (HO1), a stress-inducible enzyme belonging to the heme oxygenase family, is widely expressed across tissues and cells. It catalyzes the rate-limiting step of heme degradation into biliverdin, iron, and carbon monoxide, with anti-oxidative, anti-inflammatory, and cytoprotective functions. HO1 plays pivotal roles in maintaining cellular redox homeostasis, mitigating oxidative stress, and regulating immune responses, contributing to tissue repair, cancer progression, and cardiovascular health. HO1 interacts with KEAP1, a cysteine-rich adaptor protein, inhibiting KEAP1-mediated ubiquitination of Nrf2 to activate cytoprotective signaling.Briefly, KEAP1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to HO1-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-KEAP1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately.Measured by its binding ability in a functional ELISA. When Recombinant HO1 is Immobilized at 2 μg/mL(100 uLwell), the concentration of KEAP1 that produces 50% optimal bindingresponse is found to be approximately 0.019 μg/mL.

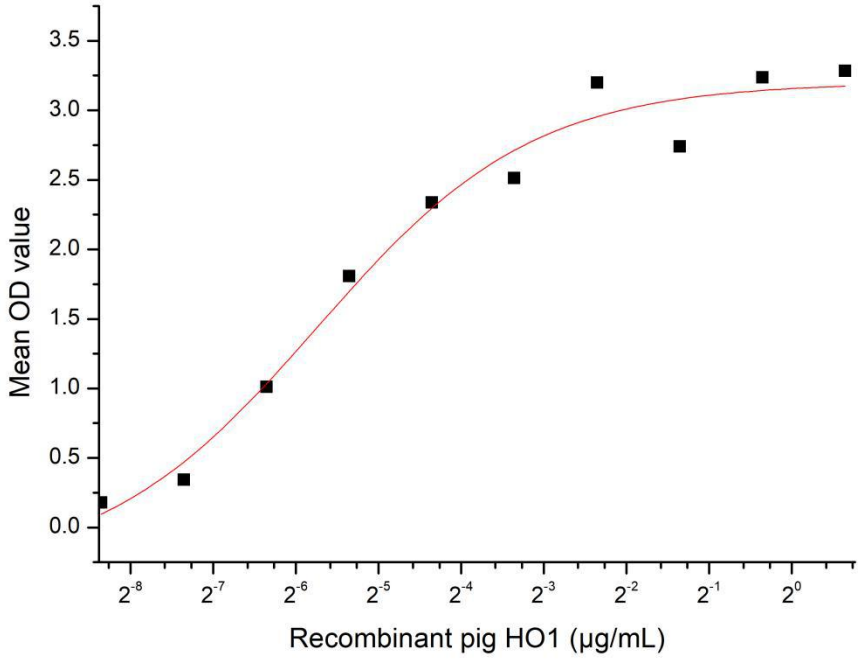

Figure 1. The binding activity of recombinant KEAP1 and HO1

[IDENTIFICATION]

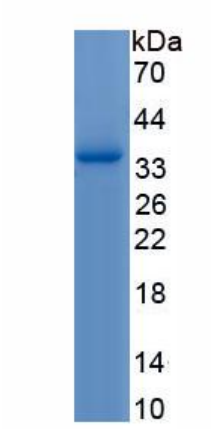

Figure 2. SDS-PAGE

Sample: Active recombinant HO1, Pig

[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.