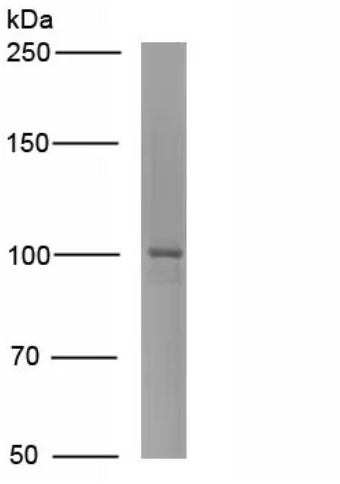
Active Amiloride Binding Protein 1 (ABP1)

Catalog#:PHH12452

概述（Summary）

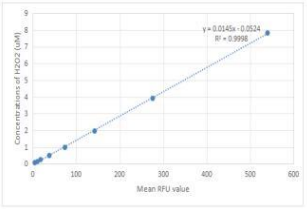
别称（Alternative Names）	AOC1; DAO; KAO; Histaminase; Kidney amine oxidase; Diamine Oxidase; Amiloride-sensitive amine oxidase; Amine oxidase copper domain-containing protein 1
纯度（Purity）	Greater than 97% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Glu20-Val751】
Accession #	P19801
表达宿主（Host）	293F
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	85.1 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.6) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Catalyzes the degradation of compounds such as putrescine, histamine, spermine, and spermidine, substances involved in allergic and immune responses, cell proliferation, tissue differentiation, tumor formation, and possibly apoptosis. Placental DAO is thought to play a role in the regulation of the female reproductive function.

电泳图（SDS-PAGE image）



Greater than 97% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）



RFU (544/590)	H_2O_2 (product) uM
539.79	7.8125
275.79	3.90625
142.19	1.953125
73.98	0.9765625
37.9	0.48828125
17.96	0.244140625
10.31	0.122070313
4.57	0.061035156

Figure 1. The standard curve of H_2O_2

One unit of enzyme activity is defined as the 1 µg of enzyme required to convert 1 pmol of histamine to H_2O_2 in 1min at 37°C. The specific activity of recombinant human ABP1/AOC1 is > 500 pmol/min/µg.

$$\text{Specific Activity (pmol/min/µg)} = \frac{\Delta OD * F}{T * N}$$

△OD=Adjusted for Substrate Blank
F=Conversion Factor (convert from standard curve of H_2O_2)
T= Time
N=Amount of enzyme

Amiloride binding protein (ABP1), also known as amine oxidase copper domain-containing protein 1 (AOC1), is an approximately 110 kDa member of the copper-containing amine oxidase family. ABP1 is a glycosylated enzyme that forms disulfide-linked homodimers. It is stored in cytoplasmic granules of epithelial cells in the kidney, placenta, uterus, lung, and intestine, and its extracellular release can be induced by heparin. ABP1 exhibits a substrate preference for histamine and putrescine, generating hydrogen peroxide and ammonia in an oxidative deamination reaction. ABP1 activity plays an important role in the catabolism of histamine and other bioactive polyamines. The activity of recombinant human ABP1 was measured by its ability to produce hydrogen peroxide during the oxidation of histamine. The reaction was performed in 50 mM HEPES, pH 7.5 (assay buffer), initiated by addition 50 µL of various concentrations of ABP1 (diluted by assay buffer) to 50 µl substrate mixture of 10 uM histamine, 2 units/mL HRP and 100 µM AUR. Read at excitation and emission wavelengths of 544 nm and 590 nm (top read), respectively in kinetic mode for 5 minutes.

注意事项（Note）

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