

Active Recombinant Rat Cyp1a1 protein, His-GST-tagged

Cat. No. Cyp1a1-7964R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Rat Cyp1a1 protein(P00185)(251-521 aa), fused with N-terminal His tag and GST tag, was expressed in E.coli.
Species	Rat
Source	E.coli
ProteinLength	251-521 aa
Form	PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Bio-activity	Cytochrome P450 1A1 (CYP1A1) is a member of Cytochromes P450 superfamily of enzymes. Cytochromes P450 are a group of heme-thiolate monooxygenases. It oxidizes a variety of structurally unrelated compounds, including steroids, fatty acids, and xenobiotics. CYP1A1 is also known as AHH (aryl hydrocarbon hydroxylase). It is involved in the metabolic activation of aromatic hydrocarbons (polycyclic aromatic hydrocarbons, PAH). Besides, Heat Shock 70kDa Protein 4 (HSPA4) has been identified as an interactor of CYP1A1, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat CYP1A1 and recombinant rat HSPA4. Briefly, CYP1A1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to HSPA4-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-CYP1A1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the

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addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50μ stop solution to the wells and read at 450nm immediately. The binding activity of CYP1A1 and HSPA4 was shown, and this effect was in a dose dependent manner.

Molecular Mass	61.5kDa
Endotoxin	<1.0EU per 1μg (determined by the LAL method).
Purity	> 80%
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Store at -20°C for 12 months. Aliquot and store at -80°C for 12 months.
Reconstitution	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name	Cyp1a1 cytochrome P450, family 1, subfamily a, polypeptide 1 [<i>Rattus norvegicus</i>]
Official Symbol	Cyp1a1
Synonyms	CYP1A1; cytochrome P450, family 1, subfamily a, polypeptide 1; cytochrome P450 1A1; CYPIA1; P450MT2; P450form6; dioxin-inducible; cytochrome P1-450; cytochrome P450-C; cytochrome P450MT2; cytochrome P450, 1a1; microsomal monooxygenase; xenobiotic monooxygenase; aryl hydrocarbon hydroxylase; flavoprotein-linked monooxygenase; cytochrome P450 subfamily I (aromatic compound-inducible) member A1 (C6 form c) (C6 form c); cytochrome P450, subfamily I (aromatic compound-inducible), member A1 (C6, form c) (C6, form c); AHH; AHRR; CP11; CYP1; Cyp45c; P1-450; P450-C; P450DX; Cypc45c; P-450MC;

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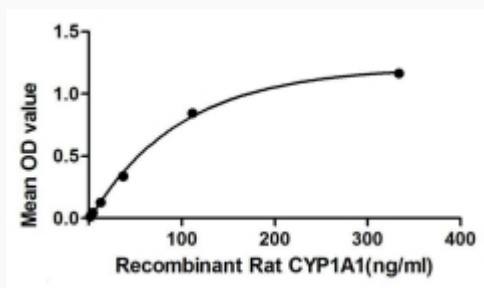
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Gene ID 24296

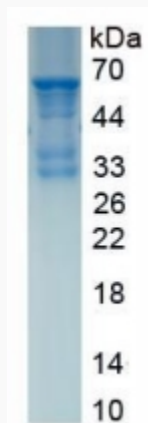
mRNA Refseq NM_012540

Protein Refseq NP_036672

Activity



SDS-PAGE



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