

Anti-Cytochrome P450 4X1 Antibody

Catalog # AP51152

Product Information

Application	WB, IHC, IF/IC
Primary Accession	Q8N118
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	58875

Additional Information

Gene ID	260293
Other Names	Cytochrome P450 4X1; CYP4X1
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Cytochrome P450 4X1. The exact sequence is proprietary.
Dilution	WB~~ 1:1000 IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

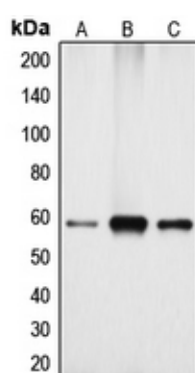
Name	CYP4X1 {ECO:0000303 PubMed:18549450, ECO:0000312 HGNC:HGNC:20244}
Function	A cytochrome P450 monooxygenase that selectively catalyzes the epoxidation of the last double bond of the arachidonoyl moiety of anandamide, potentially modulating endocannabinoid signaling. Has no hydroxylase activity toward various fatty acids, steroids and prostaglandins. Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via cytochrome P450 reductase (CPR; NADPH-ferrihemoprotein reductase).
Cellular Location	Endoplasmic reticulum membrane {ECO:0000250 UniProtKB:Q6A152}; Single-pass membrane protein. Microsome membrane {ECO:0000250 UniProtKB:Q6A152}; Single-pass membrane protein
Tissue Location	Expressed in brain, heart, kidney and skin and, at lower levels, in skeletal muscle and liver (PubMed:16478468, PubMed:18549450). In the brain, high

levels are detected in amygdala and lower levels in globus pallidus and cerebellum (PubMed:18549450) In the heart, very high levels in aorta, but very low levels in other heart regions (PubMed:16478468, PubMed:18549450). Also expressed in breast, prostate and colon (PubMed:18549450)

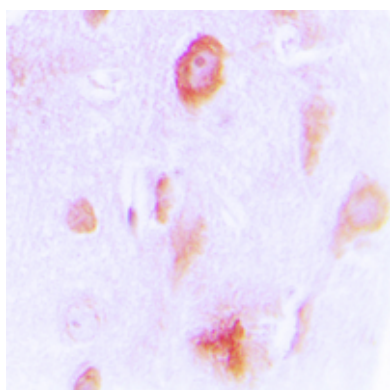
References

Al-Anizy M.,et al.FEBS J. 273:936-947(2006).
Clark H.F.,et al.Genome Res. 13:2265-2270(2003).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Gregory S.G.,et al.Nature 441:315-321(2006).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

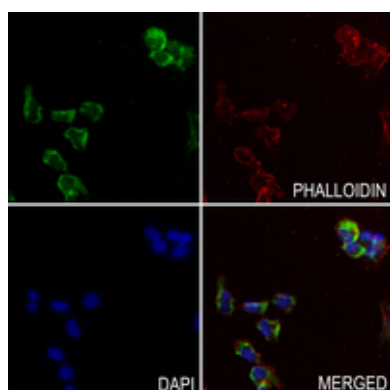
Images



Western blot analysis of Cytochrome P450 4X1 expression in Jurkat (A), mouse kidney (B), rat kidney (C) whole cell lysates. (Predicted band size: 58 kD; Observed band size: 59 kD)



Immunohistochemical analysis of Cytochrome P450 4X1 staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Cytochrome P450 4X1 staining in HUH7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).