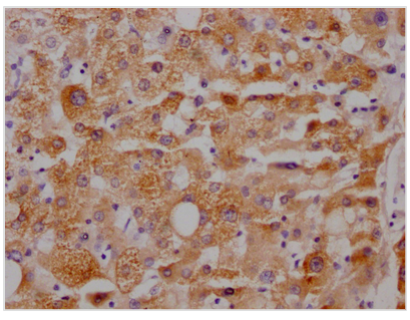
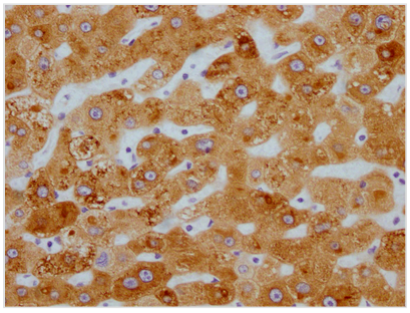
CYP3A4 Recombinant Monoclonal Antibody

Product Code	CSB-RA153677A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P08684
Immunogen	A synthesized peptide derived from human Cytochrome P450 3A4
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	Cytochromes P450 are a group of heme-thiolate monooxygenases. In liver microsomes, this enzyme is involved in an NADPH-dependent electron transport pathway. It performs a variety of oxidation reactions (e.g. caffeine 8-oxidation, omeprazole sulphoxidation, midazolam 1'-hydroxylation and midazolam 4-hydroxylation) of structurally unrelated compounds, including steroids, fatty acids, and xenobiotics. Acts as a 1,8-cineole 2-exo-monooxygenase. The enzyme also hydroxylates etoposide (PubMed:11159812). Catalyzes 4-beta-hydroxylation of cholesterol. May catalyze 25-hydroxylation of cholesterol in vitro (PubMed:21576599).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cancer; Cardiovascular; Metabolism; Signal transduction
Gene Names	CYP3A4
Clone No.	10B10

Image



IHC image of CSB-RA153677A0HU diluted at 1:100 and staining in paraffin-embedded human liver tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA153677A0HU diluted at 1:100 and staining in paraffin-embedded human liver cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The CYP3A4 recombinant monoclonal antibody is well-suited for detecting human CYP3A4 protein in ELISA and IHC applications. Its production is accomplished through the use of recombinant DNA technology, which involves synthesizing the gene that codes for the CYP3A4 monoclonal antibody following the sequencing of the cDNA of the CYP3A4 antibody-producing hybridomas. To produce these hybridomas, B cells isolated from animals immunized with a synthesized peptide derived from human CYP3A4 are fused with myeloma cells. The synthesized gene is then cloned into a vector and transfected into cells for cultivation. The resulting CYP3A4 recombinant monoclonal antibody is purified via affinity chromatography from the cell culture supernatant.

The CYP3A4 protein, also known as cytochrome P450 3A4, is a member of the cytochrome P450 family of enzymes, which play a crucial role in the metabolism of various drugs, toxins, and endogenous compounds in the liver and other tissues. Specifically, CYP3A4 is responsible for the metabolism and breakdown of a large number of drugs, including statins, anti-cancer drugs, anti-depressants, anti-arrhythmic drugs, and many others. It is also involved in the metabolism of steroid hormones, such as testosterone, estrogen, and cortisol.