CYP3A4 Protein, Human (His)

Cat. No.:	HY-P74210
Synonyms:	Cytochrome P450 3A4; CYPIIIA3; CYP3A4; CYP3A3
Species:	Human
Source:	E. coli
Accession:	NP_059488.2 (A2-A503)
Gene ID:	1576
Molecular Weight:	Approximately 59.2 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris 1/1000 CHAPS. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The CYP3A4 gene encodes a member of the cytochrome P450 superfamily of enzymes, which are monooxygenases playing a crucial role in drug metabolism and the synthesis of cholesterol, steroids, and lipids. This enzyme localizes to the endoplasmic reticulum, and its expression is induced by glucocorticoids and certain pharmacological agents. CYP3A4 is a key player in the metabolism of about half of the drugs in current use, encompassing substances like acetaminophen, codeine, cyclosporin A, diazepam, erythromycin, and chloroquine. Additionally, the enzyme participates in the metabolism of steroids and carcinogens. The gene is situated in a cluster of cytochrome P450 genes on chromosome 7q21.1. Formerly, another CYP3A gene, CYP3A3, was believed to exist, but it is now considered to be a transcript variant of CYP3A4. Multiple alternatively spliced transcript variants have been identified, encoding different isoforms of the enzyme. With biased expression observed in the liver (RPKM 476.5), small intestine (RPKM 282.8), and one other tissue, CYP3A4 is a pivotal factor in drug metabolism and overall xenobiotic processing.

Caution: Product has not been fully validated for medical applications. For research use only.

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