

Recombinant Mouse Cyp11a1 Protein, Myc/DDK-tagged

Cat. No. Cyp11a1-2409M Lot. No. (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length cytochrome P450, family 11, subfamily a, polypeptide 1 (Cyp11a1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	<p>A cytochrome P450 monooxygenase that catalyzes the side-chain hydroxylation and cleavage of cholesterol to pregnenolone, the precursor of most steroid hormones. Catalyzes three sequential oxidation reactions of cholesterol, namely the hydroxylation at C22 followed with the hydroxylation at C20 to yield 20R,22R-hydroxycholesterol that is further cleaved between C20 and C22 to yield the C21-steroid pregnenolone and 4-methylpentanal. Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate and reducing the second into a water molecule. Two electrons are provided by NADPH via a two-protein mitochondrial transfer system comprising flavoprotein FDXR (adrenodoxin/ferredoxin reductase) and nonheme iron-sulfur protein FDX1 or FDX2 (adrenodoxin/ferredoxin).</p>
Molecular Mass	60.3 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.
GENE INFORMATION	
Gene Name	Cyp11a1 cytochrome P450, family 11, subfamily a, polypeptide 1 [Mus musculus (house mouse)]
Official Symbol	Cyp11a1
Synonyms	Cyp11a1; cytochrome P450, family 11, subfamily a, polypeptide 1; Sc; Scc; csc; Cyp1; csc; P450s; Cyp11a; Cypxia1; P450scc; D9Ert411; D9Ert411e; cholesterol side-chain cleavage enzyme, mitochondrial; cholesterol desmolase; cytochrome P450 11A1; cytochrome P450 side-chain cleavage enzyme; cytochrome P450(scc); cytochrome P450, 11a, cholesterol side-chain cleavage; EC 1.14.15.6
Gene ID	13070
mRNA Refseq	NM_019779
Protein Refseq	NP_062753
UniProt ID	Q9QZ82

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