



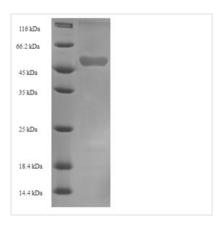
Recombinant Human NADPH:adrenodoxin oxidoreductase, mitochondrial (FDXR)

Product Code	CSB-EP008575HU
Relevance	Serves as the first electron transfer protein in all the mitochondrial P450 systs. Including cholesterol side chain cleavage in all steroidogenic tissues, steroid 11-beta hydroxylation in the adrenal cortex, 25-OH-vitamin D3-24 hydroxylation in the kidney, and sterol C-27 hydroxylation in the liver.
Abbreviation	Recombinant Human FDXR protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P22570
Product Type	Recombinant Proteins
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	STQEKTPQICVVGSGPAGFYTAQHLLKQHPQAHVDIYEKQPVPFGLVRFGVAP DHPEVKSYGAEDHRALEIPGEELPGVCSARAFVGWYNGLPENQELEPDLSCD TAVILGQGNVALDVARILLTPPEHLERTDITKAALGVLRQSRVKTVWLVGRRGP LQVAFTIKELREMIQLPGARPILDPVDFLGLQDKIKEVPRPRKRLTELLLRTATEK PGPAEAARQASASRAWGLRFFRSPQQVLPSPDGRRAAGVRLAVTRLEGVDE ATRAVPTGDMEDLPCGLVLSSIGYKSRPVDPSVPFDSKLGVIPNVEGRVMDVP GLYCSGWVKRGPTGVIATTMTDSFLTGQMLLQDLKAGLLPSGPRPGYAAIQAL LSSRGVRPVSFSDWEKLDAEEVARGQGTGKPREKLVDPQEMLRLLGH
Research Area	Cell Biology
Source	E.coli
Target Names	FDXR
Protein Names	Recommended name: NADPH:adrenodoxin oxidoreductase, mitochondrial Short name= AR Short name= Adrenodoxin reductase EC= 1.18.1.2Alternative name(s): FerredoxinNADP(+) reductase Short name= Ferredoxin reductase
Expression Region	33-451aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	58.5kDa
Protein Length	Full Length of Mature Protein
Image	

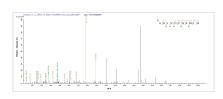
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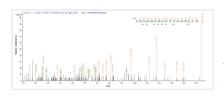




(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP008575HU could indicate that this peptide derived from E.coli-expressed Homo sapiens (Human) FDXR.



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Description

The preparation of this recombinant Human FDXR protein was to use gene recombination DNA technology to obtain a recombinant vector connected with a FDXR fragment (33-451aa) that could be translated into the FDXR protein and then transferred it into E.coli cells to express the recombinant FDXR protein molecule. In order to get the target protein with high purity, N-terminal 6xHis-SUMO tag was used in the production. The purity is 90% determined by SDS-PAGE.

Ferredoxin reductase (FDXR, also known as adrenodoxin reductase) is a mitochondrial flavoprotein and functions as the first electron transfer protein of mitochondrial P450 systems such as P450scc. It is a mitochondrial flavoprotein that initiates electron transport from NADPH to several cytochromes P450 via two electron carriers, ferredoxin 1 (FDX1) and FDX2. Functionally, FDXR is suggested to be involved in various metabolic processes, including steroidogenesis, heme and iron-sulfur cluster biosynthesis. Notably, recent studies have shown that FDXR mutations are associated with mitochondrial disorders, probably due to their role in iron-sulfur cluster protein biosynthesis. In addition, FDXR has also been found to be a sensitive and reliable biomarker of radiation exposure in vivo. FDXR could regulate TP73 tumor suppressor via IRP2 to modulate aging and tumor suppression. Mutation in FDXR gene is associated with Sensorial Neuropathies. Abundant FDXR expression in these steroidogenic cells was maintained through SF-1 binding to the intronic enhancer of the FDXR gene.

Shelf Life

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