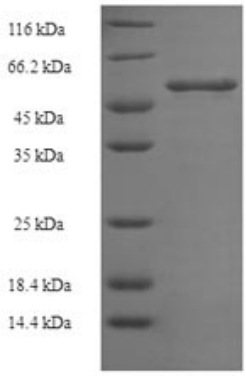
Recombinant Plasmodium falciparum Multidrug resistance protein (MDR1), partial

Product Code	CSB-EP318386PLT
Relevance	Energy-dependent efflux pump responsible for decreased drug accumulation in multidrug-resistant cells.
Abbreviation	Recombinant Plasmodium falciparum MDR1 protein, partial
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.	P13568
Alias	Chloroquine resistance protein
Product Type	Recombinant Protein
Immunogen Species	Plasmodium falciparum (isolate FC27 / Papua New Guinea)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	KGDSENAKLSFEKYYPLMIRKSNIDVRDDGGIRINKNLIKGKVDIKDVNFRYISR PNVPIYKNLSFTCDSKKTTAIVGETGSGKSTFMNLLLRFYDLKNDHIILKNDMTN FQDYQNNNNNSLVLKNVNEFSNQSGSAEDYTVFNNNGEILLDDINICDYNLRD LRNLFSIVSQEPMLFNMSIYENIKFGREDATLEDVKRVSKFAAIDEFIESLPNKY DTNVGPYGKSLSGGQKQRIAIARALLREPKILLLDEATSSLDSNSEKLIEKTIVDI KDKADKTIITIAHRIASIKRSDKIVVFNNPDRNGTFVQSHGTHDELLSAQDGIYKK YVKLAK
Research Area	Others
Source	E.coli
Target Names	MDR1
Expression Region	1084-1419aa
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	54.2kDa
Protein Length	Cytoplasmic Domain
Image	



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

Description

Amino acids 1084-1419 constitute the expression domain of recombinant Plasmodium falciparum MDR1. The theoretical molecular weight of the MDR1 protein is 54.2 kDa. This MDR1 recombinant protein is manufactured in e.coli. The N-terminal 6xHis-SUMO tag was smoothly integrated into the coding gene of MDR1, which enables a simple process of detecting and purifying the MDR1 recombinant protein in the following steps.

Plasmodium falciparum multidrug resistance protein 1 (MDR1) is an ATP-binding cassette (ABC) transporter encoded by the pfmdr1 gene in the genome of the malaria-causing parasite, Plasmodium falciparum. MDR1 is primarily associated with resistance to multiple antimalarial drugs. MDR1 plays a critical role in mediating the efflux of various drugs from the parasite's digestive vacuole, where hemoglobin degradation occurs during the blood stage of the Plasmodium life cycle. The overexpression or mutations in the pfmdr1 gene can lead to reduced drug accumulation within the parasite, contributing to resistance against commonly used antimalarial drugs, including chloroquine and mefloquine. Understanding the function and regulation of MDR1 is crucial for developing strategies to overcome drug resistance and enhance the efficacy of antimalarial treatments. Researchers aim to explore new drug targets and design alternative therapeutic approaches to combat drug-resistant strains of Plasmodium falciparum.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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