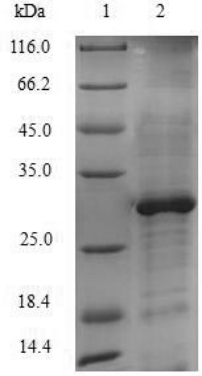
Recombinant Saccharomyces cerevisiae Lanosterol 14-alpha demethylase (ERG11), partial

Product Code	CSB-EP006459SVG1
Relevance	Catalyzes C14-demethylation of lanosterol which is critical for ergosterol biosynthesis. It transforms lanosterol into 4,4'-dimethyl cholesta-8,14,24-triene-3-beta-ol.
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.	P10614
Alias	CYPLI Cytochrome P450 51 Cytochrome P450-14DM Cytochrome P450-LIA1 Sterol 14-alpha demethylase
Product Type	Recombinant Protein
Immunogen Species	Saccharomyces cerevisiae (strain ATCC 204508 / S288c) (Baker's yeast)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MSATKSIVGEALEYVNIGLS
Lead Time	3-7 business days
Research Area	Others
Source	E.coli
Gene Names	ERG11
Expression Region	1-20aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal GST-tagged
Mol. Weight	29.1kDa
Protein Description	Extracellular Domain
Image	



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

Description

The recombinant Baker's yeast ERG11 was expressed with the amino acid range of 1-20. This ERG11 protein is expected to have a theoretical molecular weight of 29.1 kDa. This ERG11 recombinant protein is manufactured in e.coli. The ERG11 gene fragment has been modified by fusing the N-terminal GST tag, providing convenience in detecting and purifying the recombinant ERG11 protein during the following stages.

In Saccharomyces cerevisiae, lanosterol 14-alpha demethylase (ERG11) is a cytochrome P450 monooxygenase that plays a crucial role in the ergosterol biosynthesis pathway. ERG11 catalyzes the demethylation of lanosterol, a key step in the conversion of lanosterol to ergosterol. Ergosterol is the fungal counterpart to mammalian cholesterol and is essential for maintaining the integrity and fluidity of the yeast cell membrane. Inhibition of ERG11 disrupts ergosterol synthesis, leading to impaired membrane function and increased cell permeability. Research areas related to ERG11 include antifungal drug development, as this enzyme is the target of azole antifungal drugs. Understanding the structure and function of ERG11 is crucial for developing new antifungal therapies and combating fungal infections.

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.