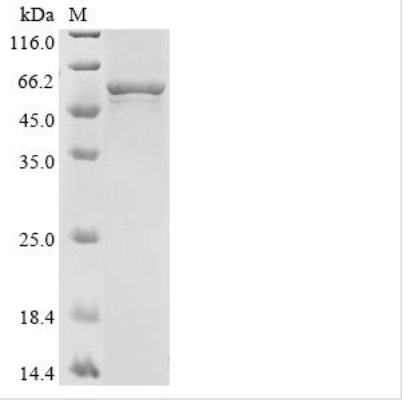
Recombinant Human Aromatase (CYP19A1)

Product Code	CSB-EP006394HUa0
Abbreviation	Recombinant Human CYP19A1 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.	P11511
Form	Liquid or Lyophilized powder
Storage Buffer	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	MVLEMLNPIHYNITSIVPEAMPAATMPVLLLTGLFLLVWNYEGTSSIPGPGYCM GIGPLISHGRFLWMGIGSACNYYNRVYGEFMRVWISGEETLIISKSSSMFHIMK HNHYSSRFGSKLGLQCIGMHEKGIIFNNNPELWKTTRPFFMKALSGPGLVRMV TVCAESLKTHLDRLEEVTNESGYVDVLTLLRRVMLDTSNTLFLRIPLDESAIVVK IQGYFDAWQALLIKPDIFFKISWLYKKYEKSVKDLKDAIEVLIAEKRRRISTEEKL EECMDFATELILAEKRGDLTRENVNQCILEMLIAAPDTMSVSLFFMLFLIAKHPN VEEAIIKEIQTVIGERDIKIDDIQKLKVMENFIYESMRYQPVVDLVMRKALEDDVI DGYPVKKGTNIILNIGRMHRLEFFPKPNEFTLENFAKNVPYRYFQPFGFGPRG CAGKYIAMVMMKAILVTLLRRFHVKTLQGQCVESIQKIHDLSLHPDETKNMLEM IFTPRNSDRCLEH
Research Area	Cancer
Source	E.coli
Target Names	CYP19A1
Expression Region	1-503aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	62.0 kDa
Protein Length	Full Length
Image	



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

Description

Expressing the recombinant human aromatase (CYP19A1) protein generally involves constructing a plasmid encoding the human CYP19A1 protein (1-503aa) and the N-terminal 6xHis-tag. This plasmid is introduced into E.coli cells, followed by the selection and culturing of positive E.coli cells, induction of protein expression, and subsequent cell lysis. The recombinant human CYP19A1 protein is purified through affinity purification, and SDS-PAGE analysis is conducted to confirm the presence of the protein and determine its purity. This protein exhibits a purity exceeding 85%.

CYP19A1 is an important enzyme in making estrogen. It helps convert androgens into estrogens, which is crucial for regulating hormones and keeping the body functioning smoothly [1]. This enzyme is found in different tissues like the ovaries, placenta, fat tissue, testes, and certain parts of the brain [2]. Its job isn't just about making estrogen; it also affects cell growth and hormone release [3][4]. Plus, CYP19A1 has links to health issues like endometriosis, infertility, and cancer [5][6][7]. Researchers have found that factors like microRNAs, gene variations, and chemical marks on DNA can all mess with how much CYP19A1 we have, affecting hormone levels and disease risks [8][9]. And it's not working alone; other proteins like Foxl2 and NR5A1 help regulate its activity [4][10]. In studies on cells from ovaries, changes in the CYP19A1 gene altered how the cells behaved [11]. Plus, when the androgen receptor isn't working right, it can throw off CYP19A1's activity, showing how different hormones can interact [12]. All in all, CYP19A1 does a lot—it's not just about making estrogen, but it's also deeply involved in reproductive processes and the development of certain health conditions.

References:

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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	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.