

Datasheet for ABIN7546687  
**CYP17A1 Protein (AA 1-508) (His tag)**



[Go to Product page](#)

## Overview

Quantity:	1 mg
Target:	CYP17A1
Protein Characteristics:	AA 1-508
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CYP17A1 protein is labelled with His tag.

## Product Details

Purpose:	Custom-made recombinant CYP17A1 Protein expressed in mammalian cells.
Sequence:	MWELVALLLL TLAYLFWPKR RCPGAKYPKS LLSLPLVGSL PFLPRHGHMH NNFFKLQKKY GPIYSVRMGT KTTVIVGHHQ LAKEVLIKKG KDFSGRPQMA TLDIASNNRK GIAFADSGAH WQLHRRlama TFALFKDGDQ KLEKIICQEI STLCDMLATH NGQSIDISFP VFVAVTNVIS LICFNtsykn GdPELNVIQN YNEGIIDNLS KDSLVDLVPW LKIFPNKTLK KLKSHVKIRN DLLNKILENY KEKFRSDSIT NMLDTLMQAK MNSDNGNAGP DQDSELLSDN HILTTIGDIF GAGVETTTSV VKWTLAFLH NPQVKKKLYE EIDQNVGFSR TPTISDRNRL LLEATIREV LRLRPVAPML IPHKANVDSS IGEFAVDKGT EVIINLWALH HNEKEWHQPD QFMperFLNP AGTQLISPSV SYLPFGAGPR SCIGEILARQ ELFLIMAWLL QRFDLEVPDD GQLPSLEGIP KVVFLIDSFK VKIKVRQAWR EAQAEGST <b>Sequence without tag. The proposed Purification- Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.</b>

## Product Details

---

**Specificity:** If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.

---

**Characteristics:** **Key Benefits:**

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

---

**Purity:** > 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)

---

**Grade:** custom-made

---

## Target Details

---

**Target:** CYP17A1

---

**Alternative Name:** CYP17A1 ([CYP17A1 Products](#))

---

**Background:** Steroid 17-alpha-hydroxylase/17,20 lyase (EC 1.14.14.19) (17-alpha-hydroxyprogesterone aldolase) (EC 1.14.14.32) (CYPXVII) (Cytochrome P450 17A1) (Cytochrome P450-C17) (Cytochrome P450c17) (Steroid 17-alpha-monooxygenase),FUNCTION: A cytochrome P450 monooxygenase involved in corticoid and androgen biosynthesis (PubMed:9452426, PubMed:27339894, PubMed:22266943, PubMed:25301938). Catalyzes 17-alpha hydroxylation of C21 steroids, which is common for both pathways. A second oxidative step, required only for androgen synthesis, involves an acyl-carbon cleavage. The 17-alpha hydroxy intermediates, as part of adrenal glucocorticoids biosynthesis pathway, are precursors of cortisol (PubMed:9452426, PubMed:25301938) (Probable). Hydroxylates steroid hormones, pregnenolone and progesterone to form 17-alpha hydroxy metabolites, followed by the cleavage of the C17-C20 bond to form C19 steroids, dehydroepiandrosterone (DHEA) and

---

## Target Details

---

androstenedione (PubMed:9452426, PubMed:27339894, PubMed:22266943, PubMed:25301938, PubMed:36640554). Has 16-alpha hydroxylase activity. Catalyzes 16-alpha hydroxylation of 17-alpha hydroxy pregnenolone, followed by the cleavage of the C17-C20 bond to form 16-alpha-hydroxy DHEA (PubMed:36640554). Also 16-alpha hydroxylates androgens, relevant for estriol synthesis (PubMed:27339894, PubMed:25301938). Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via cytochrome P450 reductase (CPR, NADPH-ferrihemoprotein reductase) (PubMed:9452426, PubMed:27339894, PubMed:22266943, PubMed:25301938). {ECO:0000269|PubMed:22266943, ECO:0000269|PubMed:25301938, ECO:0000269|PubMed:27339894, ECO:0000269|PubMed:36640554, ECO:0000269|PubMed:9452426, ECO:0000305|PubMed:8027220}.

---

Molecular Weight: 57.4 kDa

---

UniProt: [P05093](#)

---

Pathways: [Metabolism of Steroid Hormones and Vitamin D](#), [Steroid Hormone Biosynthesis](#), [Regulation of Hormone Metabolic Process](#), [Regulation of Hormone Biosynthetic Process](#), [C21-Steroid Hormone Metabolic Process](#), [Cellular Response to Molecule of Bacterial Origin](#)

## Application Details

---

Application Notes: We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

---

Restrictions: For Research Use only

## Handling

---

Format: Liquid

---

Buffer: The buffer composition is at the discretion of the manufacturer.

---

Handling Advice: Avoid repeated freeze-thaw cycles.

---

Storage: -80 °C

---

Storage Comment: Store at -80°C.

---

Expiry Date: 12 months