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Aromatase (CYP19A1) Antibody (Center) Blocking peptide

Synthetic peptide
Catalog # BP7293c

Specification

Aromatase (CYP19A1) Antibody (Center) Blocking peptide - Product Information

Primary Accession P11511

Aromatase (CYP19A1) Antibody (Center) Blocking peptide - Additional Information

Gene ID 1588

Other Names
Aromatase, CYPXIX, Cytochrome P-450AROM, Cytochrome P450 19A1, Estrogen synthase, CYP19A1, ARO1, CYAR, CYP19

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7293c was selected from the Center region of human CYP19A1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Aromatase (CYP19A1) Antibody (Center) Blocking peptide - Protein Information

Name CYP19A1 {ECO:0000303|PubMed:24705274, ECO:0000312|HGNC:HGNC:2594}

Function
A cytochrome P450 monooxygenase that catalyzes the conversion of C19 androgens, androst-4-ene-3,17-dione (androstenedione) and testosterone to the C18 estrogens, estrone and estradiol, respectively (PubMed:27702664, PubMed:2848247). Catalyzes three successive oxidations of C19 androgens: two conventional oxidations at C19 yielding 19-hydroxy and 19-oxo/19-aldehyde derivatives, followed by a third oxidative aromatization step that involves C1-beta hydrogen abstraction combined with cleavage of the C10-C19 bond to yield a phenolic A ring and formic acid (PubMed:20385561). Alternatively, the third oxidative reaction yields a 19-norsteroid and formic acid. Converts dihydrotestosterone to delta1,10-dehydro 19- nordihydrotestosterone and may play a role in homeostasis of this potent

androgen (PubMed:22773874). Also displays 2-hydroxylase activity toward estrone (PubMed:22773874). 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:20385561, PubMed:22773874).

Cellular Location
Endoplasmic reticulum membrane; Multi-pass membrane protein. Microsome membrane; Multi-pass membrane protein

Tissue Location
Widely expressed, including in adult and fetal brain, placenta, skin fibroblasts, adipose tissue and gonads

Aromatase (CYP19A1) Antibody (Center) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Aromatase (CYP19A1) Antibody (Center) Blocking peptide - Images

Aromatase (CYP19A1) Antibody (Center) Blocking peptide - Background

CYP19A1 is a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids.This protein localizes to the endoplasmic reticulum and catalyzes the last steps of estrogen biosynthesis, three successive hydroxylations of the A ring of androgens. Mutations in this gene can result in either increased or decreased aromatase activity; the associated phenotypes suggest that estrogen functions both as a sex steroid hormone and in growth or differentiation.

Aromatase (CYP19A1) Antibody (Center) Blocking peptide - References

Ikeda,S.,Am. J. Gastroenterol. 103 (6), 1476-1487 (2008)Dos Santos,(er) DNA Cell Biol. (2008) In pressNelson,Pharmacogenetics 14 (1), 1-18 (2004)