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Goat Anti-Aromatase / CYP19A1 Antibody

Peptide-affinity purified goat antibody
Catalog # AF1106a

Specification

Goat Anti-Aromatase / CYP19A1 Antibody - Product Information

Application	**WB**
Primary Accession	P11511
Other Accession	NP_112503, 1588
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**57883**

Goat Anti-Aromatase / CYP19A1 Antibody - Additional Information

Gene ID 1588

Other Names
Aromatase, 1.14.14.14, CYPXIX, Cytochrome P-450AROM, Cytochrome P450 19A1, Estrogen synthase, CYP19A1, ARO1, CYAR, CYP19

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-Aromatase / CYP19A1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-Aromatase / CYP19A1 Antibody - 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

Goat Anti-Aromatase / CYP19A1 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-Aromatase / CYP19A1 Antibody - Images

AF1106a (0.1 µg/ml) staining of Human Placenta lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-Aromatase / CYP19A1 Antibody - Background

This gene encodes 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. The gene expresses two transcript variants.

Goat Anti-Aromatase / CYP19A1 Antibody - References

Association of CYP19 and ESR1 Pleiotropic Genes With Human Longevity. Corbo RM, et al. J Gerontol A Biol Sci Med Sci, 2010 Sep 5. PMID 20819792.
Epistasis between CYP19A1 and ESR1 polymorphisms is associated with premature ovarian failure. Kim S, et al. Fertil Steril, 2010 Aug 24. PMID 20797716.
Association of CYP19A1 polymorphisms with risks for atypical adenomatous hyperplasia and bronchioloalveolar carcinoma in the lungs. Kohno T, et al. Carcinogenesis, 2010 Aug 5. PMID 20688833.
Comprehensive analysis of common genetic variation in 61 genes related to steroid hormone and insulin-like growth factor-I metabolism and breast cancer risk in the NCI breast and prostate cancer cohort consortium. Canzian F, et al. Hum Mol Genet, 2010 Oct 1. PMID 20634197.
Genetic susceptibility to urinary incontinence: implication of polymorphisms of androgen and oestrogen pathways. Cornu JN, et al. World J Urol, 2010 Jul 14. PMID 20628746.