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Anti-Aromatase CYP19A1 Rabbit Monoclonal Antibody

Catalog # ABO14003

Product Information

Application	WB, IP
Primary Accession	P11511
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-Aromatase CYP19A1 Rabbit Monoclonal Antibody . Tested in WB, IP applications. This antibody reacts with Human, Rat.

Additional Information

Gene ID	1588
Other Names	Aromatase, 1.14.14.14, CYPXIX, Cytochrome P-450AROM, Cytochrome P450 19A1, Estrogen synthase, CYP19A1 {ECO:0000303|PubMed:24705274, ECO:0000312|HGNC:HGNC:2594}
Calculated MW	57883
Application Details	WB 1:500-1:2000 IP 1:50
Subcellular Localization	Membrane; Peripheral membrane protein.
Tissue Specificity	Brain, placenta and gonads..
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: AABB-3
Immunogen	A synthesized peptide derived from human Aromatase
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

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).

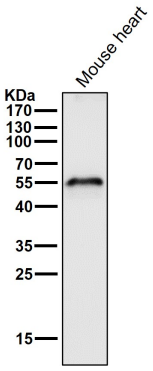
Cellular Location

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

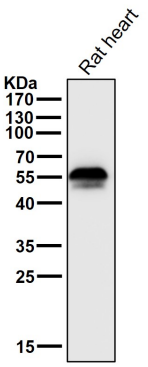
Tissue Location

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

Images

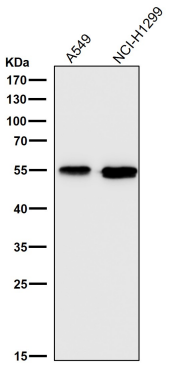


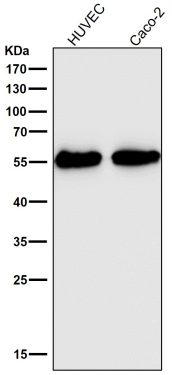
All lanes use the Antibody at 1:2K dilution for 1 hour at room temperature.



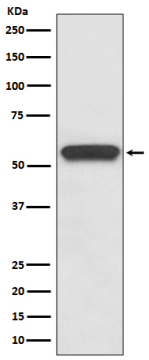
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Western blot analysis of Aromatase expression in rat brain lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.