

Product Information

Anti-Aromatase

produced in rabbit, affinity isolated antibody

Catalog Number **A7981**

Product Description

Anti-Aromatase is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 472-486 of human aromatase (GeneID: 1588), conjugated to KLH via an added cysteine residue. The corresponding peptide differs from the rat sequence by three amino acids. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Aromatase specifically recognizes human aromatase. The antibody may be used in several applications including immunoblotting (50-55 kDa) and indirect immunofluorescence. Detection of the aromatase band by immunoblotting is specifically inhibited by the immunizing peptide.

Aromatase, also known as CYP19A1, CYP XIX, P-450_{arom}, and ARO, is a cytochrome P450 enzyme complex responsible for estrogen biosynthesis that converts testosterone to estradiol, and androstenedione to estrone. Aromatase catalyzes the final and key step, the conversion of C₁₉ steroids to estrogens. Two proteins, cytochrome P450_{arom} and NADPH-cytochrome P450 reductase, are necessary for its enzymatic activity.¹ The enzyme complex is localized in the smooth endoplasmic reticulum of estrogen producing cells.² Aromatase is expressed in a number of cells and tissues, such as placenta, gonads, various parts of the brain, adipose tissue, normal breast and breast cancer tissue, and fetal tissues.³ Aromatase tissue-specific expression is determined, at least in part, by alternative use of tissue specific promoters, which result in transcripts with a unique 5-prime non-coding terminus.^{4,5} Aromatase inhibitors successfully treat breast cancer and endometriosis, whereas their roles in endometrial cancer, uterine fibrosis, and aromatase excess syndrome are less clear.⁶

Reagent

Supplied as a solution in 0.01 M PBS, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.5-1 µg/mL is recommended using human placenta tissue lysate.

Indirect immunofluorescence: a working concentration of 0.5-1 µg/mL is recommended using paraformaldehyde fixed HEK-293T cells transfected with aromatase.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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3. Vottero, A., et al., *J. Endocrinol.*, **154**, 425-431 (2006).
4. Harada, N., et al., *Proc. Natl. Acad. Sci. USA*, **90**, 11312-11316 (1993).
5. Shozu, M., et al., *Endocrinology*, **139**, 1610-1617 (1998).
6. Bulun, S. E., et al., *Pharmacol. Rev.*, **57**, 359-383 (2005).

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