

Datasheet

Anti-CYP450 Aromatase Clone H4

Product Name	Anti Human Cytochrome P450 H4 Aromatase
Catalogue Number	H4
Clone, Isotype	H4, IgG2a
Format	IgG
Tested Applications	WB, IHC, IF, ICC

Description:

CYP450 Aromatase is part of the CYP19A1 family involved in the aromatization of androgens to estrogens, a highly conserved mechanism amongst mammals. Clone H4 recognizes a conserved epitope on the CYP450 aromatase, allowing for detection of aromatase levels using various analysis methods. (Turner et al. 2002).

Product Details:

Form in stock: IgG, purified – 1.0 mg/mL. Also available as unpurified supernatant.

Host: Mouse

Specificity: Synthetic peptide corresponding to AAs 376-390 of human aromatase (KALEDDVIDGYPVKK).

Human Histology positive control: Human placenta

Fusion partner: Spleen cells immunised from Balb/c were fused with cells of the mouse SP2/0 myeloma cell line.

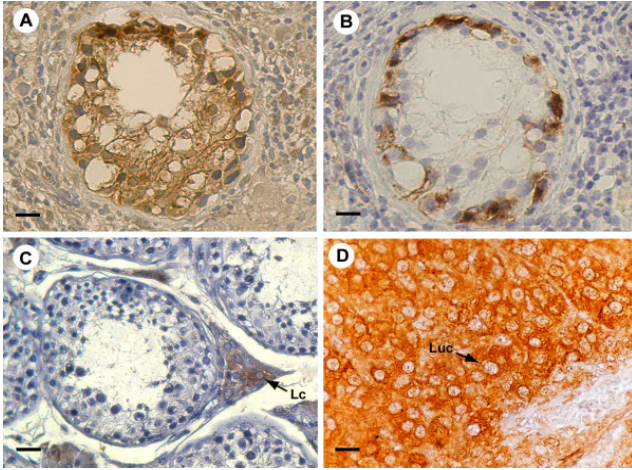
Storage: Store at +4°C or -20°C. Avoid repeated freezing and thawing.

Shelf life: 18 months from date of dispatch.

Regulatory/ Restrictions: For research and commercial purposes.

Applications	Suggested Dilution
Western Blot	1:50 – 1:5000 ^{1,5,8}
Immunohistochemistry - Paraffin	1:50 – 1:100 ^{2,9,10}
Immunofluorescence	1:100 ^{3,6}
Immunocytochemistry	1:75 ⁴

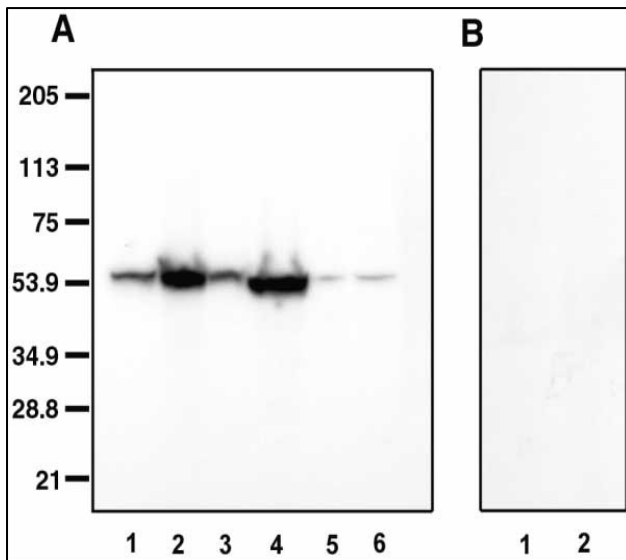
Applications:



Clone H4 used to detect aromatase in human tissues by IHC-P.

Image caption: A: Intense aromatase immunostaining in IGCC cells. B: Placental-like alkaline phosphatase staining of IGCC basal cells C: Strong aromatase immunoreactivity of interstitial Leydig cells in normal testis (Lc) D: Intense immunostaining of luteal cells (Luc) in ovarian tissue.(Rago, V et al. 2005)

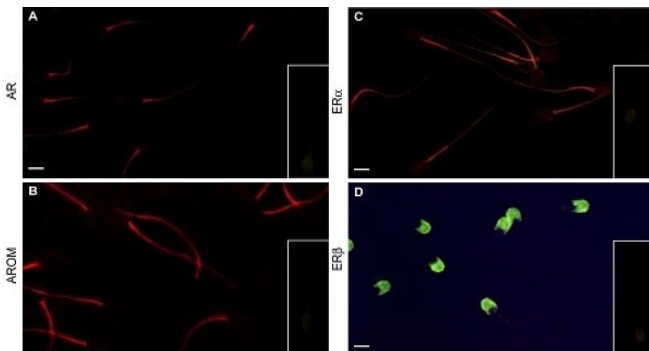
Dilution used: 1:50



Binding of H4 to a 55 kDa protein on the Cytochrome P450 aromatase protein by Western Blot

Image Caption: On Western blots, a single protein of ~55 kDa was recognised by the monoclonal antibody raised against a peptide within the P450 aromatase protein (A). No signal was seen on blots incubated with antibody that had been pre-absorbed with immunising peptide (B). Extracts were prepared from the following tissues: lane 1, human placenta; lane 2, marmoset placenta; lane 3, marmoset ovary; lane 4, ovary from pregnant rat; lanes 5 and 6, ovaries from two rats killed at pro-oestrus.(Turner et al. 2002).

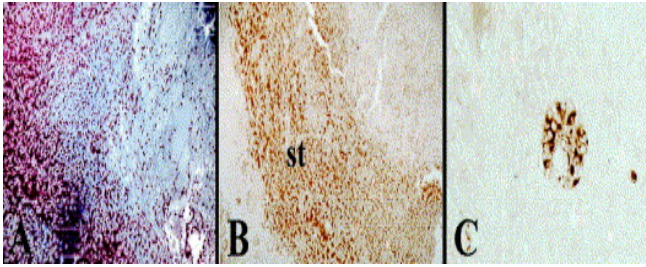
Dilution used: 1:5000



Clone H4 used to detect aromatase in pig sperm by Immunofluorescence

Image caption: ...B) P450arom red brilliant light in the proximal tail of sperm with a diffuse labelling in the distal tail... (Rago, V et al. 2007)

Dilution used: 1:100



Clone H4 used to detect aromatase in stromal cells by ICC

Image caption: Immunocytochemical localization of aromatase in the stromal cells of an endometriotic lesion (B) and in granulosa cells of a developing follicle (C, positive control). The histology of this lesion (A). *st* = stromal cells. (Fazleabas,, AT et al.)

Dilution used: 1:75

References:

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3. Rago, V., Aquila, S., Panza, R., & Carpino, A. (2007). Cytochrome P450arom, androgen and estrogen receptors in pig sperm. *Reproductive Biology and Endocrinology*, 5, 23.
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8. Wilsher, S., Stansfield, F., Greenwood, R.E.S., Trethowan, P.D., Anderson, R.A., Wooding, F.B.W., Allen, W.R. (2013) Ovarian and placental morphology and endocrine functions in the pregnant giraffe (*Giraffa camelopardalis*). *Reproduction* 145 (6) 541-554. **WB, Dilution used 1:5000**
9. Pakarainen, T., Zhang, F-P., Nurmi, L., Poutanen, M., Huhtaniemi, I. (2005) Knockout of Luteinizing Hormone Receptor Abolishes the Effects of Follicle-Stimulating Hormone on Preovulatory Maturation and Ovulation of Mouse Graafian Follicles. *Molecular Endocrinology*; 19 (10): 2591-2602. **IHC-P, Dilution used 1:50**
10. Mlodawska, W., Slomczynska, M. (2010) Immunohistochemical localization of aromatase during the development and atresia of ovarian follicles in prepubertal horses. *Theriogenology; Volume 74, Issue 9, Pages 1707-1712, ISSN 0093-691X. IHC-P, Dilution used 1:50*
11. Amanatullah, Derek F., et al. (2017) Local Estrogen Axis in the Human Bone Microenvironment Regulates Estrogen Receptor-Positive Breast Cancer Cells. *Breast Cancer Research, BioMed Central. IHC-P, Dilution used 1:100*