

## Datasheet

### Anti-ERβ 5 Clone PPG5/25

|                     |                               |
|---------------------|-------------------------------|
| Product Name        | Mouse Anti Human ERβ5 PPG5/25 |
| Catalogue Number    | PPG5/25                       |
| Clone, Isotype      | PPG5/25, IgG1                 |
| Format              | IgG                           |
| Tested Applications | IHC, WB, IF                   |

#### Description:

Estrogen receptors are commonly over-expressed in cancers. Clone PPG5/25 recognizes Estrogen Receptor Beta (ERβ) 5 and is useful in determining the expression of ERβ5 in cancer cells, mainly via immunohistochemistry.

#### Product Details:

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

**Host:** Mouse

**Specificity:** Tuberculin conjugated peptide that recognizes C terminus of ERβ5 at sequence LLSHVRHARYAP.

**Human Histology positive control:** Normal colon or colon carcinoma

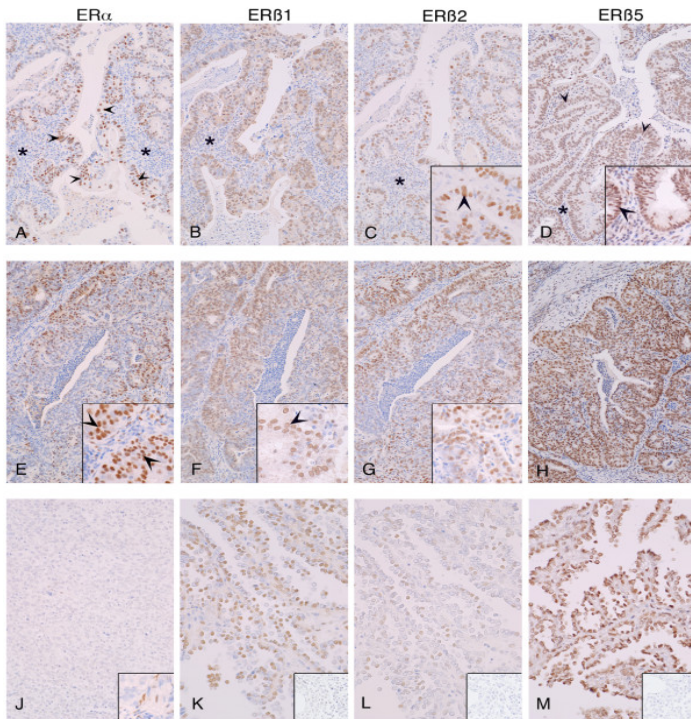
**Storage:** Store at +4°C or -20°C. Avoid repeated freezing and thawing.

**Shelf life:** 18 months from date of dispatch.

**Regulatory/ Restrictions:** For research and commercial purposes.

| Applications         | Suggested Dilution          |
|----------------------|-----------------------------|
| Immunohistochemistry | 1:50-1:100 <sup>1,2,4</sup> |
| Western Blot         | Assay dependent             |
| Immunofluorescence   | 1:500 <sup>3</sup>          |

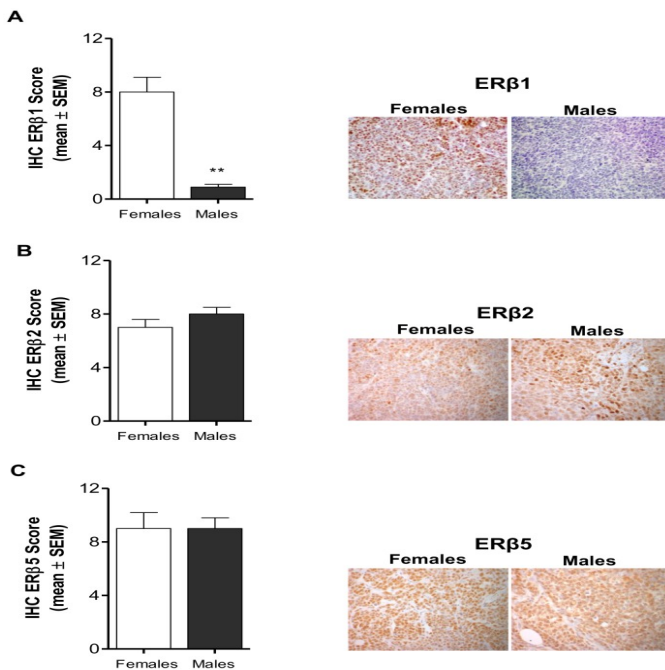
**Applications:**



Clone PPG5/25 used to detect expression of ERβ5 in cancer tissue by **IHC-P**

**Image caption:** Immunoeexpression of ERs in endometrial cancers. Tissues were classified as well (A-D), moderately (E-H) or poorly (J-M) differentiated; ...immunoexpression of ERβ1, 2, 5 was readily detected (K, L, M). Inserts in panels K, L, and M show negative controls for ERβ1, ERβ2 and ERβ5 antibodies respectively generated using primary antibodies pre-absorbed with specific peptides used for immunisation. Asterisks (\*) label the stromal compartment that was well defined in the well differentiated cancers. (Collins, F et al.)

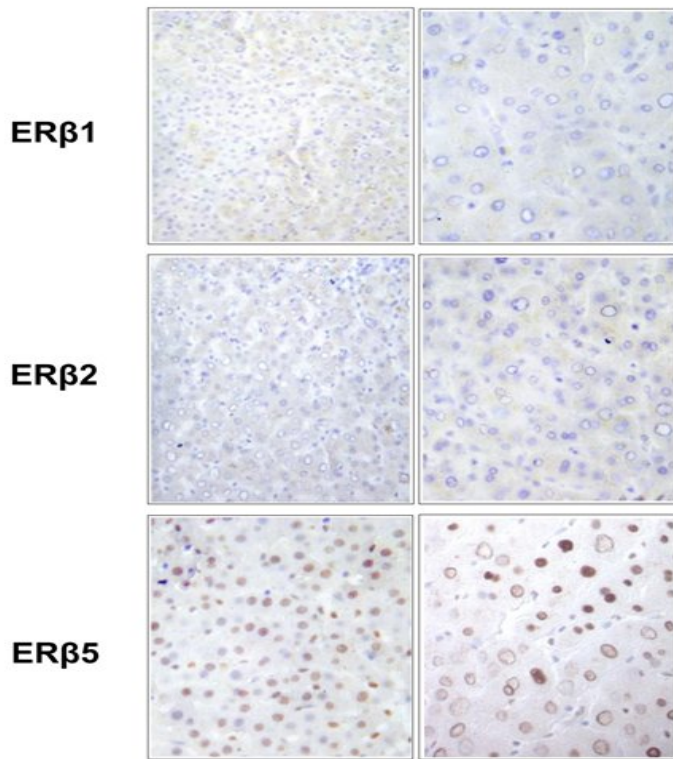
**Dilution used:** 1:75



Clone PPG5/25 used to detect expression of ERβ5 in cancer tissue by **IHC-P**

**Image caption:** A) Immunostaining for ERβ1 was significantly higher in tumors from females compared to males (\*\* $p < 0.01$ ); B) and C) Tumor levels of ERβ2 and ERβ5 did not significantly differ between females and males. All results are expressed as the mean ± SEM (n=6 tumors/group). Representative stained section of tumors from females and males are shown (magnification 40x). IHC, immunohistochemical score. (Ciucci, A et al.)

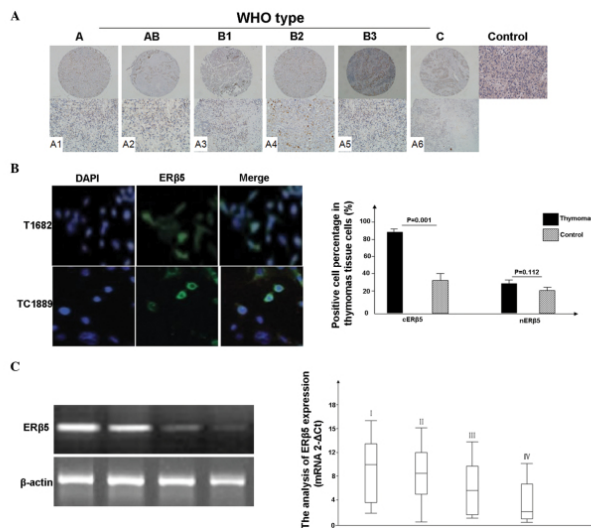
**Dilution used:** 1:100



Clone PPG5/25 used to detect ERβ5 expression in normal human liver by IHC-P

**Image caption:** Staining pattern of the ERβ isoforms in human liver. In order to confirm the specificity of the ERβ antibodies used in the study, we immunostained sections of human healthy liver, showing that ERβ1 and ERβ2 isoforms are not expressed, while specific nuclear ERβ5 immunoreactivity is detected (magnification 20x and 40x). This pattern of ERβ isoforms immunoreactivity is consistent with previous descriptions. (Ciucci, A et al.)

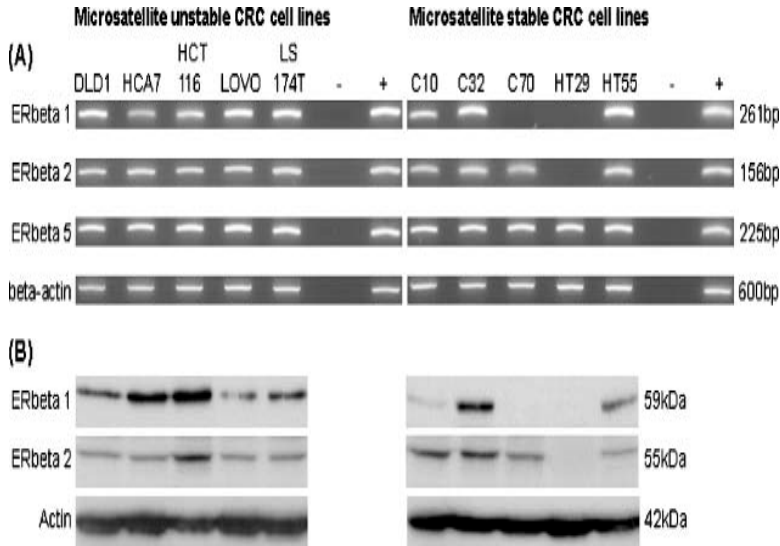
**Dilution used:** 1:100



Clone PPG5/25 used to detect ERβ5 expression thymic tumors by Immunofluorescence

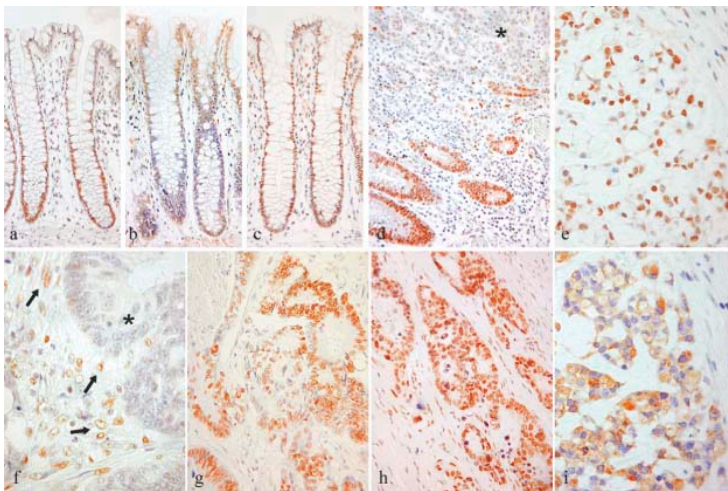
**Image caption:** ... (A) ... Overexpression of cytoplasmic ERβ5 was observed in thymic carcinomas and thymomas, compared with the normal thymic tissues. (B) ERβ5 expression was observed in the T1682 and TC1889 cell lines through indirect immunofluorescence. (C) ... The results revealed that the mean level of ERβ5 gene expression was lower in advanced clinical stages. ERβ5, estrogen receptor β5. (LI, S et al.)

**Dilution used:** 1:500



Clone PPG5/25 used to detect ERβ5 mRNA expression in colorectal carcinoma cells by Western Blot

**Image caption:** (A) ERβ1, 2 and 5 mRNA expression (assessed by RT-PCR) and (B) ERβ1 and 2 protein expression (assessed by western blotting) by 10 colorectal carcinoma cell lines. (Wong, N.A et al.)



Clone PPG5/25 used to detect expression of ERβ5 in colorectal tissue by IHC-P

**Image caption:** Examples of ERβ1 (a, d, e), ERβ2 (b, f, g), ERβ5 (c, h) and TFF1 (i) immunohistochemistry performed on normal colorectal epithelium (a-c) and colorectal carcinoma (d-i)... (Wong, N. A et al.)

**Dilution used:** 1:50



## References:

1. Collins, F., McPherson, S., Brown, P., Bombail, V., Williams, A. R., Anderson, R. A., Saunders, P. T. (2009). Expression of oestrogen receptors, ER $\alpha$ , ER $\beta$ , and ER $\beta$  variants, in endometrial cancers and evidence that prostaglandin F may play a role in regulating expression of ER $\alpha$ . *BMC Cancer*, 9, 330.
2. Ciucci, A., Meco, D., De Stefano, I., Travaglia, D., Zannoni, G. F., Scambia, G., Gallo, D. (2014). Gender Effect in Experimental Models of Human Medulloblastoma: Does the Estrogen Receptor  $\beta$  Signaling Play a Role? *PLoS ONE*, 9(7), e101623.
3. LI, S.-Y., WANG, Y.-X., WANG, L., QIAN, Z.-B., & JI, M.-L. (2015). Cytoplasm estrogen receptor  $\beta$ 5 as an improved prognostic factor in thymoma and thymic carcinoma progression. *Oncology Letters*, 10(4), 2341–2346.
4. Wong, N. A., Malcomson, R. D., Jodrell, D. I., Groome, N. P., Harrison, D. J. and Saunders, P. T. (2005), ER $\beta$  isoform expression in colorectal carcinoma: an *in vivo* and *in vitro* study of clinicopathological and molecular correlates. *J. Pathol.*, 207: 53–60.
5. Zannoni, G.F., Ciucci, A., Marucci, G., Travaglia, D., Stigliano, E., Foschini, M.P., Scambia, G., Gallo, D. (2016) Sexual dimorphism in medulloblastoma features. *Histopathology* 68, 541–548. **IHC-P, Dilution used 1:100**