Anti-Progesterone Receptor Antibody [JF0549] ET1702-24

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IF-Cell, IF-Tissue, IHC-P, IP
Molecular Wt:	Predicted band size: 99 kDa
Clone number:	JF0549

Description: PR, a protein with 946 amino acids, is a ligand-activated transcription factor member of the steroid receptor super family of nuclear receptors. The functional structure is similar to that of estrogen receptor (ER), with considerable sequence homology in the DNA-binding central domain. PR is predominantly expressed in tumours of female sex steroid responsive tissues such as the mammary gland, endometrium and the ovary. About half of the breast carcinomas are ER+/PR+. A small fraction (<5%) is ER-/PR+. About half of the non-mucinous ovarian carcinomas are also PR+. From other PR-expressing tumours, meningiomas, various pancreatic neoplasms such as solid-pseudopapillary tumour and endocrine tumours, and salivary gland neoplasms are worth mentioning. The ER and PR status has been used for over 20 years as a predictor of breast carcinoma responsiveness to endocrine therapy and as a prognostic indicator for early recurrence. Up to 75% of ER+/PR+ breast carcinomas respond positively to endocrine treatment. ER+/PR- tumours are less responsive, and thus PR status adds information to ER-status. In combination the two predict benefit from endocrine therapy both in adjuvant setting and in advanced disease. In breast cancer predominance of one isoform, namely PR-B, is common. The majority of endometrial carcinomas express only one isoform. The applications of antibodies to PR are similar to those against ER, i.e. diagnosis of PR-positive tumours (often metastasis) and prediction of therapeutic response of breast carcinoma.

Immunogen: Synthetic peptide within N-terminal human Progesterone Receptor.

Positive control: T-47D cell lysate, MCF7 cell lysate, T-47D, human smooth muscle tissue, human breast tissue.

Subcellular location: Nucleus, Cytoplasm, Mitochondrion outer membrane.

Database links: SwissProt: P06401 Human

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:100
IF-Tissue	1:500
IHC-P	1:500-1:1,000
IP	Use at an assay dependent concentration.

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

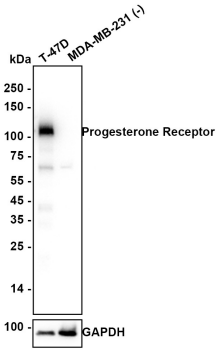

Fig1: Western blot analysis of Progesterone Receptor on different lysates with Rabbit anti-Progesterone Receptor antibody (ET1702-24) at 1/1,000 dilution.

Lane 1: T-47D cell lysate
Lane 2: MDA-MB-231 cell lysate (negative)

Lysates/proteins at 20 µg/Lane.

Predicted band size: 99 kDa
Observed band size: 118 kDa

Exposure time: 9 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1702-24) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

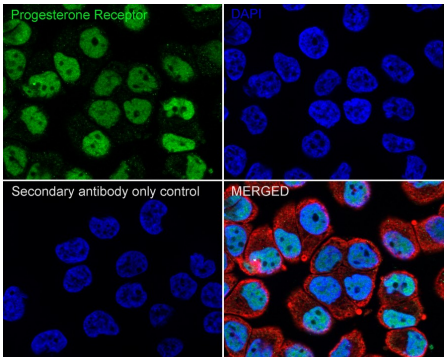

Fig2: Immunocytochemistry analysis of T-47D cells labeling Progesterone Receptor with Rabbit anti-Progesterone Receptor antibody (ET1702-24) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-Progesterone Receptor antibody (ET1702-24) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

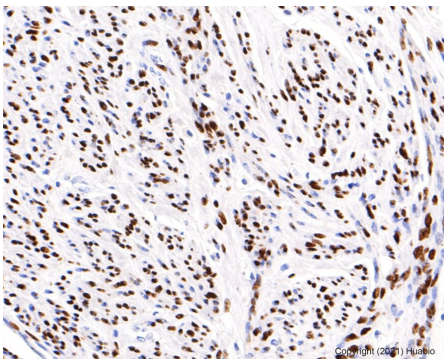

Fig3: Immunohistochemical analysis of paraffin-embedded human smooth muscle tissue using anti-Progesterone Receptor antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1702-24, 1/100) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

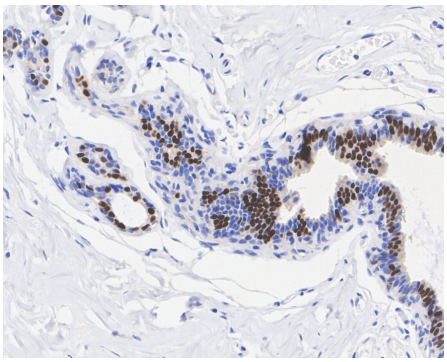

Fig4: Immunohistochemical analysis of paraffin-embedded human breast tissue with Rabbit anti-Progesterone Receptor antibody (ET1702-24) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1702-24) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

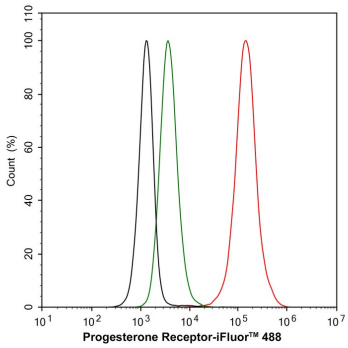

Fig5: Flow cytometric analysis of T-47D cells labeling Progesterone Receptor.

Cells were fixed and permeabilized. Then stained with the primary antibody (ET1702-24, 1μg/mL) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

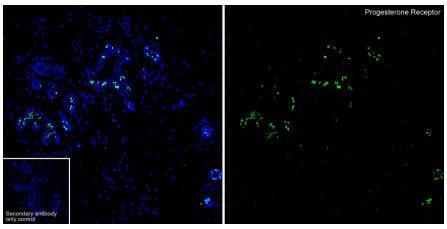

Fig6: Application: IF-Tissue

Species: Human

Site: breast

Sample: Paraffin-embedded section

Antibody concentration: 1/500

Background References

1. Bondi CD et al. The effect of estradiol, progesterone, and melatonin on estrous cycling and ovarian aromatase expression in intact female mice. Eur J Obstet Gynecol Reprod Biol 174:80-5 (2014).
2. Yu Y et al. Prostate stromal cells express the progesterone receptor to control cancer cell mobility. PLoS One 9:e92714 (2014).