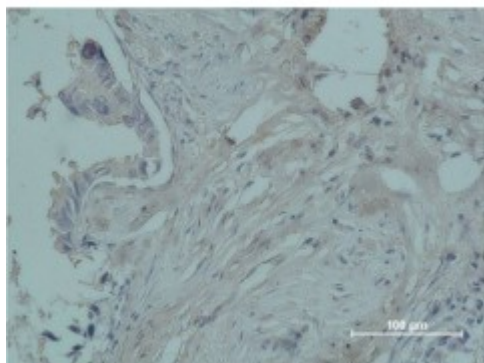


Anti-PR antibody



Description

PR is a protein encoded by the PGR gene which is approximately 98,9 kDa. PR is localised to the nucleus and cytoplasm. It is involved in the oocyte meiosis, gene expression, nuclear receptor transcription pathway and signalling by ERBB4. This protein falls under the steroid receptor superfamily. It mediates the physiological effects of progesterone, which plays a central role in reproductive events associated with the establishment and maintenance of pregnancy. PR is expressed in the heart, lymph nodes, muscle, blood and nervous system. Mutations in the PGR gene may result in progesterone resistance. STJ97365 was developed from clone Z15 and was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen. The antibody detects endogenous PR protein.

Model	STJ97365
Host	Mouse
Reactivity	Human, Mouse, Rat
Applications	IF, IHC
Immunogen	Synthetic Peptide
Gene ID	5241
Gene Symbol	PGR
Dilution range	IHC 1:200IF: 1:100-200
Specificity	The antibody detects endogenous PR protein.
Tissue Specificity	In reproductive tissues the expression of isoform A and isoform B varies as a consequence of developmental and hormonal status. Isoform A and isoform B

are expressed in comparable levels in uterine glandular epithelium during the proliferative phase of the menstrual cycle. Expression of isoform B but not of isoform A persists in the glands during mid-secretory phase. In the stroma, isoform A is the predominant form throughout the cycle. Heterogeneous isoform expression between the glands of the endometrium

Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen.
Clone ID	Z15
Note	For Research Use Only (RUO).
Protein Name	Progesterone receptor PR Nuclear receptor subfamily 3 group C member 3
Clonality	Monoclonal
Conjugation	Unconjugated
Isotype	IgG1
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:89100MIM:607311
Alternative Names	Progesterone receptor PR Nuclear receptor subfamily 3 group C member 3
Function	The steroid hormones and their receptors are involved in the regulation of eukaryotic gene expression and affect cellular proliferation and differentiation in target tissues. Depending on the isoform, progesterone receptor functions as transcriptional activator or repressor. Isoform A: Ligand-dependent transdominant repressor of steroid hormone receptor transcriptional activity including repression of its isoform B, MR and ER. Transrepressional activity may involve recruitment of corepressor NCOR2. Isoform B: Transcriptional activator of several progesteron-dependent promoters in a variety of cell types. Involved in activation of SRC-dependent MAPK signaling on hormone stimulation. Isoform 4: Increases mitochondrial membrane potential and cellular respiration upon stimulation by progesterone.
Sequence and Domain Family	Composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal ligand-binding domain.
Cellular Localization	Nucleus. Cytoplasm. Nucleoplasmic shuttling is both hormone- and cell cycle-dependent. On hormone stimulation, retained in the cytoplasm in the G(1) and G(2)/M phases.. Isoform A: Nucleus. Cytoplasm. Mainly nuclear.. Isoform 4: Mitochondrion outer membrane
Post-translational Modifications	Phosphorylated on multiple serine sites. Several of these sites are hormone-dependent. Phosphorylation on Ser-294 occurs preferentially on isoform B, is highly hormone-dependent and modulates ubiquitination and sumoylation on Lys-388. Phosphorylation on Ser-102 and Ser-345 also requires induction by hormone. Basal phosphorylation on Ser-81, Ser-162, Ser-190 and Ser-400 is increased in response to progesterone and can be phosphorylated in vitro by the CDK2-A1 complex. Increased levels of phosphorylation on Ser-400 also in the presence of EGF, heregulin, IGF, PMA and FBS. Phosphorylation at this site by CDK2 is ligand-independent, and increases nuclear translocation and transcriptional activity. Phosphorylation at Ser-162 and Ser-294, but not at Ser-190, is impaired during the G(2)/M phase of the cell cycle.

Phosphorylation on Ser-345 by ERK1/2 MAPK is required for interaction with SP1. Sumoylation is hormone-dependent and represses transcriptional activity. Sumoylation on all three sites is enhanced by PIAS3. Desumoylated by SENP1. Sumoylation on Lys-388, the main site of sumoylation, is repressed by ubiquitination on the same site, and modulated by phosphorylation at Ser-294. Ubiquitination is hormone-dependent and represses sumoylation on the same site. Promoted by MAPK-mediated phosphorylation on Ser-294. Palmitoylated by ZDHHC7 and ZDHHC21. Palmitoylation is required for plasma membrane targeting and for rapid intracellular signaling via ERK and AKT kinases and cAMP generation.