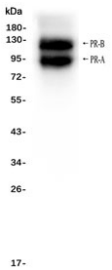
Progesterone Receptor Antibody for Western Blot / Isoforms A & B (R31442)

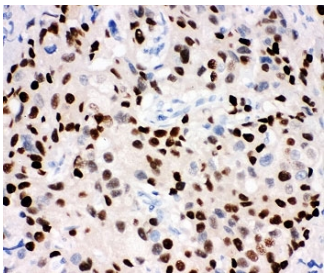
Catalog No.	Formulation	Size
R31442	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	P06401
Localization	Nuclear, cytoplasmic
Applications	Western Blot : 0.5-1ug/ml IHC (FFPE) : 0.5-1ug/ml
Limitations	This Progesterone Receptor antibody is available for research use only.



Progesterone Receptor Antibody for Western Blot analysis of Progesterone receptor / PGR. Western blot analysis was performed using human T-47D cell lysate probed with Progesterone Receptor Antibody for Western Blot. A band is detected at approximately 82-94 kDa corresponding to the predicted molecular weight of the PR-A isoform and a second band at approximately 99-120 kDa corresponding to the PR-B isoform of Progesterone receptor (PGR). These two bands represent the well-characterized PR-A and PR-B receptor isoforms generated from alternative transcription start sites of the PGR gene and are commonly observed in western blot analysis of hormone-responsive breast cancer cell lines such as T-47D.



IHC-P: Progesterone Receptor antibody testing of human breast cancer tissue

Description

Progesterone receptor (PGR) is a ligand-activated nuclear hormone receptor encoded by the PGR gene and functions as a transcription factor that mediates cellular responses to progesterone signaling. Progesterone Receptor Antibody for Western Blot targets this steroid hormone receptor, also known as Nuclear receptor subfamily 3 group C member 3 (NR3C3), a member of the nuclear receptor superfamily that regulates hormone-dependent gene transcription. Progesterone receptor is predominantly localized in the nucleus where it binds progesterone and modulates transcriptional programs controlling reproductive tissue biology, cellular differentiation, and endocrine signaling pathways.

Progesterone Receptor Antibody for Western Blot is specifically useful for detecting Progesterone receptor protein in cell and tissue lysates analyzed by western blot. Western blot analysis is widely used to evaluate Progesterone receptor expression and to visualize the characteristic receptor isoforms generated from the PGR gene. In western blot experiments, Progesterone receptor typically appears as two distinct bands representing the PR-A and PR-B isoforms, which arise from alternative transcription start sites and differ in their N-terminal regulatory domains. Because these isoforms migrate at different molecular weights during SDS-PAGE, western blot analysis provides a reliable method for distinguishing PR-A and PR-B expression patterns in hormone-responsive cells.

Western blot analysis of Progesterone receptor is commonly performed in studies of breast cancer, reproductive biology, and steroid hormone signaling. Hormone-responsive breast cancer cell lines such as T-47D and MCF-7 frequently express both PR-A and PR-B isoforms, making western blot detection an effective approach for monitoring receptor abundance and isoform distribution. Researchers often use western blot experiments to evaluate changes in Progesterone receptor levels following hormone stimulation, endocrine therapy treatment, or signaling pathway perturbation.

In western blot assays, Progesterone receptor bands may appear as multiple closely migrating species corresponding to receptor isoforms and post-translationally modified forms. PR-B contains an additional N-terminal activation domain that is absent in PR-A, producing a larger band that migrates more slowly during SDS-PAGE. In addition, phosphorylation events associated with receptor activation can cause modest mobility shifts that are detectable by western blot. These phosphorylation-dependent band shifts are frequently observed following progesterone stimulation and provide insight into receptor activation and signaling dynamics.

Progesterone Receptor Antibody for Western Blot provides a valuable research tool for examining steroid hormone receptor biology through western blot analysis. Detection of PGR protein bands allows investigators to evaluate receptor expression levels, distinguish PR-A and PR-B isoforms, and monitor receptor regulation during hormone signaling or cancer progression studies. Western blot analysis of Progesterone receptor therefore remains an important method for studying progesterone-dependent transcriptional pathways and endocrine signaling mechanisms in hormone-responsive cells.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the Progesterone Receptor Antibody for Western Blot may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human partial recombinant protein (AA 595-933) was used as the immunogen for this Progesterone Receptor antibody.

Storage

After reconstitution, the Progesterone Receptor antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

PGR antibody, NR3C3 antibody, Progesterone receptor A antibody, Progesterone receptor B antibody, PR-A antibody