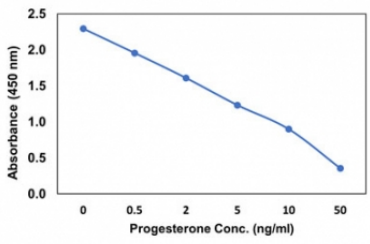
Progesterone Antibody [clone RM434] (R20449)

Catalog No.	Formulation	Size
R20449-0.1ML	1mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM434
Purity	Protein A purified from animal origin-free supernatant
Applications	Competitive ELISA: 1ng/well-10ng/well
Limitations	This Progesterone antibody is available for research use only.



Progesterone Competitive ELISA Standard Curve. Competitive ELISA testing with Progesterone Antibody clone RM434 produced a concentration-dependent decrease in absorbance as progesterone concentration increased. The representative standard curve spans approximately 0-50 ng/ml progesterone, demonstrating competitive recognition of the steroid hormone across the tested concentration range.

Description

Progesterone Antibody reagents are used to detect progesterone, a naturally occurring steroid hormone with important functions in reproductive biology, endocrine signaling, pregnancy, and steroid metabolism. Progesterone, commonly abbreviated P4, is a C21 steroid synthesized from cholesterol through the steroidogenic pathway. Also known chemically as pregn-4-ene-3,20-dione, progesterone is produced primarily by the corpus luteum during the luteal phase and by the placenta during pregnancy, with smaller amounts synthesized in the adrenal glands and other steroidogenic tissues.

Progesterone exerts many of its biological effects through progesterone receptors, members of the nuclear receptor superfamily that function as ligand-activated transcription factors. Hormone binding regulates gene expression associated

with reproductive tissue development, implantation, maintenance of pregnancy, and mammary gland biology. Progesterone signaling also interacts with estrogen and other steroid hormone pathways to coordinate reproductive and endocrine physiology.

Beyond its classical reproductive functions, progesterone has been investigated in neurological, metabolic, cardiovascular, and immune biology. Progesterone and related neuroactive steroids can influence neuronal signaling, while local steroid synthesis and metabolism contribute to tissue-specific hormone activity. These broader roles have increased interest in reliable methods for progesterone detection and measurement.

Because progesterone is a small steroid molecule rather than a protein antigen, antibody recognition depends on structural features of the hormone and the specificity generated against the steroid hapten. Closely related steroids share substantial structural similarity, making antibody selectivity an important consideration in progesterone research and quantitative immunoassays. Differences in recognition of progesterone and related steroid metabolites can influence assay characteristics and measured hormone concentrations.

A Recombinant Progesterone Antibody provides the consistency associated with recombinant monoclonal antibody production. Recombinant antibodies originate from a defined antibody sequence, providing a renewable monoclonal reagent and reducing dependence on continued production from a traditional hybridoma. This consistency can be valuable for longitudinal studies and assay development where reproducible antibody characteristics are important.

Progesterone measurement supports research into ovarian function, reproductive cycles, pregnancy biology, steroidogenesis, endocrine regulation, and hormone-responsive disease. NSJ Bioreagents offers clone RM434 as a recombinant rabbit monoclonal reagent for progesterone research. A Progesterone Antibody can provide researchers with a defined tool for investigating this biologically important steroid hormone.

Explore our Signal Transduction Antibodies page for additional reagents targeting proteins involved in hormone-responsive and intracellular signaling pathways.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Progesterone antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

KLH-conjugated Progesterone was used as the immunogen for the recombinant Progesterone antibody.

Storage

Store the Progesterone antibody at -20oC.

Alternate Names

Progesterone antibody, P4 antibody, Pregn-4-ene-3,20-dione antibody, 4-Pregnene-3,20-dione antibody

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