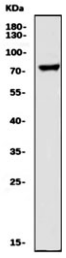
LHCGR Antibody / Luteinizing Hormone Receptor Polyclonal Antibody (RQ6491)

Catalog No.	Formulation	Size
RQ6491	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P22888
Applications	Western blot: 1-2ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This LHCGR Antibody / Luteinizing Hormone Receptor Polyclonal Antibody is available for research use only.



LHCGR Antibody by WB in human HeLa cells. Western blot analysis of human HeLa cell lysate using LHCGR Antibody RQ6491. The expected molecular weight of LHCGR is approximately 38-60 kDa, although glycosylation can increase its apparent molecular weight.

Description

LHCGR Antibody / Luteinizing Hormone Receptor Polyclonal Antibody recognizes the luteinizing hormone/choriogonadotropin receptor, a G protein-coupled receptor encoded by the LHCGR gene. Also known as the LH receptor, hCG receptor, and lutropin receptor, LHCGR mediates cellular responses to luteinizing hormone (LH) and human chorionic gonadotropin (hCG). It belongs to the glycoprotein hormone receptor family, characterized by a large extracellular domain containing leucine-rich repeats, seven transmembrane segments, and intracellular regions involved

in signal transduction. This structure enables hormone recognition and the activation of signaling pathways that regulate reproductive endocrine function.

Binding of LH or hCG to the extracellular domain promotes conformational changes that activate receptor-associated G proteins. LHCGR primarily couples to Gs proteins, stimulating adenylyl cyclase and increasing intracellular cyclic AMP concentrations. The resulting activation of protein kinase A regulates cholesterol transport and steroidogenic enzyme activity. Additional signaling mechanisms, including beta-arrestin recruitment and mitogen-activated protein kinase activation, contribute to receptor regulation and cellular responses. Receptor internalization and recycling also influence the duration and sensitivity of hormone signaling.

In the ovary, LHCGR is expressed by theca cells, luteal cells, and granulosa cells during later stages of follicular maturation. Receptor activation promotes androgen synthesis and contributes to the hormonal changes required for ovulation. The midcycle LH surge initiates follicular rupture and luteinization, leading to formation of the corpus luteum. During early pregnancy, placental hCG maintains luteal progesterone production through LHCGR until the placenta assumes this endocrine function.

In the testes, LHCGR is predominantly expressed by Leydig cells, where LH-dependent signaling stimulates testosterone biosynthesis. Testosterone supports reproductive development, androgen-dependent physiological functions, and the hormonal environment required for spermatogenesis. Genetic variants affecting receptor function can produce reproductive endocrine disorders. Inactivating variants may impair gonadal steroidogenesis, while activating variants can cause ligand-independent signaling associated with gonadotropin-independent precocious puberty.

LHCGR expression has also been investigated in selected extragonadal tissues and hormone-responsive malignancies, although its physiological significance outside established gonadal cell populations remains incompletely understood. Research examining receptor expression, cellular localization, and signaling regulation contributes to understanding reproductive endocrinology and hormone-dependent cellular responses. NSJ Bioreagents offers this LHCGR Antibody for investigating gonadotropin receptor biology, steroidogenic regulation, and the molecular mechanisms connecting endocrine signals with cellular activity.

Explore our Luteinizing Hormone Receptor Antibody LHCGR/7399 for additional research tools targeting LHCGR and investigating reproductive endocrine signaling and gonadal steroidogenesis.

Application Notes

Optimal dilution of the LHCGR Antibody / Luteinizing Hormone Receptor Polyclonal Antibody should be determined by the researcher.

Immunogen

An E. coli-derived human protein (amino acids Q67-N215) was used as the immunogen for the LHCGR antibody.

Storage

After reconstitution, the LHCGR 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

Luteinizing Hormone Receptor antibody, LH Receptor antibody, hCG Receptor antibody, Choriogonadotropin Receptor antibody, Lutropin Receptor antibody

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