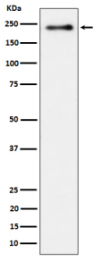
Phospho-LRP6 (pSer1490) Antibody / Low density lipoprotein receptor related protein 6 [clone 31L42] (FY12941)

Catalog No.	Formulation	Size
FY12941	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	31L42
Purity	Affinity chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	O75581
Applications	Western Blot : 1:500-1:2000
Limitations	This Phospho-LRP6 (pSer1490) antibody is available for research use only.



Western blot analysis of Phospho-LRP6 (pS1490) expression in lysate from human HeLa cells treated with Calyculin, using Phospho-LRP6 (pSer1490) antibody. A strong band is detected at ~220-230 kDa, consistent with the mature, heavily N-glycosylated and hyperphosphorylated form of LRP6, which migrates slower than the ~180 kDa unglycosylated core polypeptide.

Description

Phospho-LRP6 (pSer1490) antibody detects the phosphorylated form of Low density lipoprotein receptor related protein 6, encoded by the LRP6 gene. LRP6 is a single pass transmembrane receptor that serves as a critical co receptor in the

canonical Wnt signaling pathway. This receptor works together with the Frizzled family of proteins to transmit Wnt signals into the cell, leading to stabilization of beta catenin and activation of Wnt target genes. Phosphorylation at serine 1490 is a key activation step that amplifies the signaling cascade, and Phospho-LRP6 (pSer1490) antibody provides a precise tool to study Wnt pathway activation in both normal physiology and disease contexts.

Low density lipoprotein receptor related protein 6 is phosphorylated by kinases such as GSK3 and CK1 following Wnt ligand binding. Serine 1490 is one of the critical sites required for recruitment of the cytoplasmic effector Dishevelled and for inhibition of the beta catenin destruction complex. Research using Phospho-LRP6 (pSer1490) antibody has shown that phosphorylation at this site acts as a molecular switch, turning on downstream signaling. Without phosphorylation at serine 1490, Wnt mediated gene expression is severely impaired, demonstrating the importance of this modification in developmental and disease related signaling events.

Aberrant Wnt signaling is implicated in multiple cancers, including colorectal carcinoma, breast cancer, and hepatocellular carcinoma. Overexpression or hyperactivation of LRP6 contributes to increased beta catenin stabilization, driving oncogenic transcriptional programs. Studies employing Phospho-LRP6 (Ser1490) antibody have revealed that elevated phosphorylation correlates with poor prognosis and aggressive tumor progression. Beyond cancer, abnormal regulation of LRP6 phosphorylation is also associated with bone disorders, atherosclerosis, and neurodegenerative disease, highlighting the broad relevance of this receptor.

Phospho-LRP6 (pSer1490) antibody is widely applied in western blotting, immunohistochemistry, and immunofluorescence. Western blotting allows quantification of phosphorylated versus unphosphorylated forms, providing a readout of Wnt activation. Immunohistochemistry demonstrates tissue specific activation of Wnt signaling, while immunofluorescence visualizes membrane localized phosphorylation events in cell culture models. Researchers studying embryonic development, stem cell biology, and tumor progression use Phospho-LRP6 (pSer1490) antibody to dissect pathway activity with high specificity.

By providing validated reagents such as Phospho-LRP6 (pSer1490) antibody, NSJ Bioreagents supports investigations into Wnt pathway regulation, cancer mechanisms, and developmental biology. The ability to detect this key phosphorylation event allows scientists to better understand how external cues are transduced into cellular responses that govern growth, survival, and differentiation.

Application Notes

Optimal dilution of the Phospho-LRP6 (pSer1490) antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Phospho-LRP6 (pS1490) was used as the immunogen for the Phospho-LRP6 (pSer1490) antibody.

Storage

Store the Phospho-LRP6 (pSer1490) antibody at -20oC.