

Phospho-Beta Arrestin 1 (Ser412) Antibody / ARRB1 [clone 32A60] (FY13239)

Catalog No.	Formulation	Size
FY13239	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
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	32A60
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	P49407
Applications	Western Blot : 1:500-1:2000
Limitations	This Phospho-Beta Arrestin 1 (Ser412) antibody is available for research use only.

Description

Phospho-Beta Arrestin 1 (Ser412) antibody detects Beta arrestin 1 phosphorylated at serine 412, encoded by the ARRB1 gene. Beta arrestin 1 is a multifunctional adaptor protein best known for its role in G protein coupled receptor desensitization and internalization. Phosphorylation at serine 412 represents a key regulatory modification that influences receptor trafficking, signaling scaffolds, and cellular responses to extracellular stimuli. Phospho-Beta Arrestin 1 (Ser412) antibody provides a highly specific tool for dissecting the dynamic regulation of G protein coupled receptor signaling and arrestin mediated pathways.

Beta arrestin 1 functions by binding activated, phosphorylated G protein coupled receptors, preventing further coupling to heterotrimeric G proteins while simultaneously recruiting clathrin and adaptor proteins to promote endocytosis. Research using Phospho-Beta Arrestin 1 (Ser412) antibody has demonstrated that phosphorylation at serine 412 modulates the strength and duration of this interaction, acting as a molecular switch between receptor desensitization and alternative signaling functions. This modification influences the balance between canonical and non canonical pathways initiated at

the plasma membrane.

Beyond receptor internalization, Beta arrestin 1 acts as a scaffold for signaling cascades including MAPK, AKT, and NF kappa B pathways. Studies with Phospho-Beta Arrestin 1 (Ser412) antibody have shown that phosphorylation at serine 412 alters scaffold assembly, thereby regulating downstream signaling specificity. This makes it an essential modification for determining cellular outcomes in response to hormones, neurotransmitters, and growth factors.

Dysregulation of Beta arrestin 1 phosphorylation has been linked to disease. Research using Phospho-Beta Arrestin 1 (Ser412) antibody has revealed that altered phosphorylation patterns contribute to cardiovascular disease, neurological disorders, and cancer. In heart failure, aberrant phosphorylation disrupts receptor regulation, while in cancer, changes in Beta arrestin 1 signaling affect cell proliferation and metastasis. These observations underscore the importance of precise phosphorylation control in health and pathology.

Phospho-Beta Arrestin 1 (Ser412) antibody is widely applied in western blotting, immunohistochemistry, and immunofluorescence. Western blotting confirms phosphorylation status, immunohistochemistry highlights tissue specific activation patterns, and immunofluorescence demonstrates subcellular localization of phosphorylated arrestin in endosomes and receptor complexes. These experimental approaches make the antibody indispensable for signal transduction research.

By providing validated Phospho-Beta Arrestin 1 (Ser412) antibody reagents, NSJ Bioreagents supports research into receptor regulation, scaffold signaling, and disease mechanisms. Detection of phosphorylation at Ser412 provides precise insight into how Beta arrestin 1 controls G protein coupled receptor function.

Application Notes

Optimal dilution of the Phospho-Beta Arrestin 1 (Ser412) antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Phospho-beta Arrestin 1 (S412) was used as the immunogen for the Phospho-Beta Arrestin 1 (Ser412) antibody.

Storage

Store the Phospho-Beta Arrestin 1 (Ser412) antibody at -20oC.