Phospho-ErbB3 (pTyr1289) Antibody / HER3 [clone 32E64] (FY12312)

Catalog No.	Formulation	Size
FY12312	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	32E64
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	P21860
Applications	Western Blot : 1:500-1:2000
Limitations	This Phospho-ErbB3 (pTyr1289) antibody is available for research use only.

Description

Phospho-ErbB3 (pTyr1289) antibody is designed to detect the ErbB3 receptor tyrosine kinase when phosphorylated at tyrosine 1289. ErbB3, also known as HER3, is a member of the epidermal growth factor receptor (EGFR/ErbB) family. Unlike other ErbB receptors, ErbB3 has impaired kinase activity and functions primarily through heterodimerization with other ErbB family members such as ErbB2/HER2. Upon ligand binding, ErbB3 undergoes tyrosine phosphorylation at multiple sites, including Tyr1289, which serves as a key docking site for downstream signaling molecules like PI3K. This phosphorylation event is central to activation of the PI3K/AKT pathway, which regulates cell survival, proliferation, and differentiation.

Phospho-ErbB3 (pTyr1289) antibody is a critical reagent for studying growth factor receptor signaling. Aberrant activation of ErbB3 contributes to tumorigenesis and therapeutic resistance in cancers such as breast, ovarian, and gastric carcinoma. Elevated phosphorylation of ErbB3 is often associated with resistance to EGFR and HER2-targeted therapies, making detection of phospho-ErbB3 a valuable biomarker in oncology research.

The antibody is widely used in applications such as western blotting, immunohistochemistry, immunofluorescence, and flow cytometry. In western blot assays, Phospho-ErbB3 (Tyr1289) antibody distinguishes phosphorylated receptor isoforms from total ErbB3 protein, allowing researchers to quantify receptor activation states. In immunohistochemistry, it provides tissue-level localization of phosphorylated ErbB3, highlighting differences between normal and cancerous samples. Immunofluorescence enables visualization of receptor activation in cultured cells, often in combination with markers of proliferation or survival pathways.

Phosphorylation at Tyr1289 plays a unique role in ErbB3 signaling because it directly recruits PI3K regulatory subunits, making this site essential for downstream signaling. Dysregulation of this phosphorylation leads to uncontrolled activation of the PI3K/AKT pathway, promoting survival and growth in tumor cells. Studies employing Phospho-ErbB3 (pTyr1289) antibody have shown that inhibition of ErbB3 phosphorylation can sensitize resistant tumors to kinase inhibitors, emphasizing its translational relevance.

Beyond oncology, ErbB3 signaling has been implicated in neural development and cardiac biology, where receptor tyrosine kinases regulate cell fate and tissue maintenance. The use of phospho-specific antibodies enables researchers to connect receptor activation with physiological and pathological outcomes in diverse tissues.

Phospho-ErbB3 (pTyr1289) antibody from NSJ Bioreagents is a reliable reagent for dissecting growth factor receptor signaling. With proven specificity for phosphorylated Tyr1289, it provides accurate detection of receptor activation in multiple research contexts. This antibody supports studies of oncogenesis, therapeutic resistance, and receptor biology in both basic and translational research.

Application Notes

Optimal dilution of the Phospho-ErbB3 (pTyr1289) antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Phospho-ErbB 3 (Y1289) was used as the immunogen for the Phospho-ErbB3 (pTyr1289) antibody.

Storage

Store the Phospho-ErbB3 (pTyr1289) antibody at -20oC.