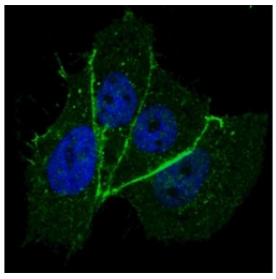
Phospho-ErbB2 (pT1172) Antibody / Regulatory Site (F48691)

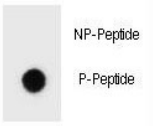
Catalog No.	Formulation	Size
F48691-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F48691-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P04626
Applications	Immunofluorescence : 1:100 Dot Blot : 1:500
Limitations	This Phospho-ErbB2 (pT1172) Antibody / Regulatory Site is available for research use only.



Phospho-ErbB2 (pT1172) Antibody MCF-7 IF. Immunofluorescence analysis of MCF-7 cells using Phospho-ErbB2 (pT1172) Antibody (green) demonstrates prominent membranous staining outlining the cell periphery with additional punctate cytoplasmic signal, consistent with phosphorylated ErbB2 / HER2 localization, while nuclei are counterstained blue.



Phospho-ErbB2 (pT1172) Antibody Dot Blot Specificity. Dot blot analysis of Phospho-ErbB2 (pT1172) Antibody demonstrates strong signal for the phosphorylated peptide and no detectable binding to the corresponding non-phosphorylated peptide, confirming phospho-specific recognition of ErbB2 / HER2 at Thr1172. Approximately 50 ng of phospho-peptide or non-phospho peptide was applied per spot.

Description

ErbB2 receptor tyrosine kinase 2 (ERBB2), also known as HER2, is a transmembrane receptor that regulates cell proliferation, survival, and differentiation through activation of intracellular signaling pathways. Phospho-ErbB2 (pT1172) antibody, also referred to as phospho-HER2 antibody and phospho-ERBB2 antibody in the literature, detects phosphorylation at threonine 1172, a regulatory residue located within the intracellular domain of HER2.

In contrast to tyrosine phosphorylation sites that are primarily associated with activation of signaling pathways, phosphorylation at serine and threonine residues can contribute to modulation of receptor activity, stability, and signaling output. Phosphorylation at T1172 reflects regulatory control within the HER2 signaling network, where multiple post-translational modifications coordinate receptor behavior and downstream pathway engagement.

HER2 signaling is tightly regulated through a combination of activating and modulatory phosphorylation events. While sites such as Y1248, Y1221, and Y1222 are directly linked to activation and propagation of signaling pathways, residues like T1172 are thought to contribute to fine-tuning of receptor signaling. This may include influencing receptor conformation, interaction with regulatory proteins, or modulation of downstream signaling intensity.

In cancer biology, particularly in tumors characterized by ERBB2 amplification such as breast carcinoma, regulation of HER2 signaling is critical for controlling cellular responses. Phosphorylation at regulatory residues such as T1172 provides additional insight into how HER2 signaling is modulated under different conditions, including cellular stress, growth factor stimulation, and therapeutic intervention.

T1172 is positioned within the intracellular domain of HER2 alongside multiple tyrosine phosphorylation sites, forming part of a complex signaling and regulatory network. Detection of phosphorylation at this site complements analysis of activation and propagation markers, supporting a more comprehensive understanding of HER2 signaling behavior.

Phospho-specific detection of ERBB2 at T1172 enables investigation of regulatory mechanisms that influence receptor activity and signaling dynamics in both normal and disease contexts.

For detection of activated HER2 phosphorylation, see our HER2 phospho antibody (pY1248).

Application Notes

Titration of the Phospho-ErbB2 (pT1172) Antibody / Regulatory Site may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

This Phospho-ErbB2 (pT1172) Antibody was produced from rabbits immunized with a KLH conjugated synthetic phospho-peptide corresponding to amino acid residues surrounding pT1172 of human HER2/ERBB2.

Storage

Aliquot the Phospho-ErbB2 (pT1172) Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Phospho-ErbB2 (pT1172) antibody, phospho-HER2 Thr1172 antibody, ERBB2 pT1172 antibody, HER2 threonine phosphorylation antibody