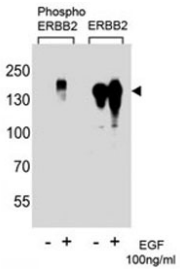
Phospho-ErbB2 (pY1222) Antibody / Signal Propagation Marker (F52420)

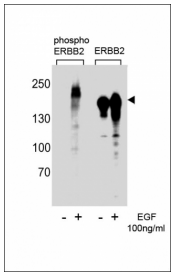
Catalog No.	Formulation	Size
F52420-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F52420-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P04626
Applications	Western Blot : 1:1000
Limitations	This Phospho-ErbB2 (pY1222) Antibody / Signal Propagation Marker is available for research use only.



Phospho-ErbB2 (pY1222) Antibody EGF-Stimulated WB. Western blot analysis of human A431 cell lysates treated with or without EGF (100 ng/ml) using Phospho-ErbB2 (pY1222) Antibody demonstrates a band at approximately 185 kDa in EGF-stimulated samples, consistent with the predicted molecular weight of phosphorylated ErbB2 / HER2, while untreated samples show lower signal intensity; parallel detection with a non-phospho ErbB2 antibody confirms total receptor expression across conditions, supporting phosphorylation-dependent signal propagation at Tyr1222.



Description

ErbB2 receptor tyrosine kinase 2 (ERBB2), also known as HER2, is regulated by phosphorylation at multiple intracellular residues that control signaling intensity, duration, and downstream pathway activation. Phospho-ErbB2 (pY1222) antibody, also referred to as phospho-HER2 antibody and phospho-ERBB2 antibody in the literature, detects phosphorylation at tyrosine 1222, a site associated with continued signaling following receptor activation. For evaluation of initial adaptor recruitment, see our Phospho-ErbB2 (pY1221) antibody.

Phosphorylation at Y1222 occurs within a signaling motif adjacent to Y1221, forming part of a cluster that recruits adaptor proteins and supports downstream signaling. While initial phosphorylation events promote recruitment of signaling complexes, phosphorylation at Y1222 contributes to maintenance and amplification of signaling through pathways such as PI3K/AKT and MAPK. This positions Y1222 as an indicator of ongoing receptor activity and signal propagation.

HER2 signaling is a major driver of tumor biology, particularly in cancers characterized by ERBB2 amplification. In these settings, phosphorylation at Y1222 contributes to sustained activation of signaling pathways that promote tumor cell survival, proliferation, and resistance to stress. Detection of this phosphorylation site provides insight into the persistence of signaling activity within tumor cells rather than early activation alone.

Y1222 functions as part of a coordinated phosphorylation network that includes nearby residues such as Y1221 and Y1248. Together, these sites regulate the progression of signaling from initiation to amplification and sustained activity. The ability to detect phosphorylation at Y1222 complements analysis of other sites and provides a more complete view of HER2 signaling dynamics across different stages.

Because phosphorylation at Y1222 reflects ongoing signaling, it is particularly useful for studying sustained pathway activation and signal maintenance in experimental systems. This includes models of chronic receptor activation, tumor progression, and response to targeted therapies.

Phospho-specific detection of ERBB2 at Y1222 enables selective analysis of receptor activity during later stages of signaling. This supports studies focused on pathway propagation and signal persistence.

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

Application Notes

Titration of the Phospho-ErbB2 (pY1222) Antibody / Signal Propagation Marker may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

This phospho-ErbB2 antibody was produced from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding pY1222 of the human protein.

Storage

Aliquot the phospho-ErbB2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Phospho-ErbB2 (pY1222) antibody, phospho-HER2 Tyr1222 antibody, ERBB2 pY1222 antibody, HER2 signaling propagation antibody