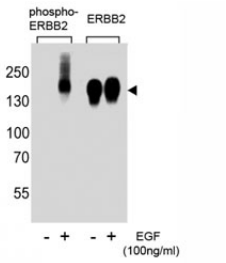
Phospho-ErbB2 (pY1139) Antibody / Signal Integration Marker (F48693)

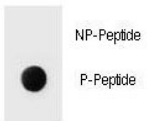
Catalog No.	Formulation	Size
F48693-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F48693-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

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 : 1:4000 Dot Blot : 1:500
Limitations	This Phospho-ErbB2 (pY1139) Antibody / Signal Integration Marker is available for research use only.



Phospho-ErbB2 (pY1139) Antibody EGF-Stimulated WB. Western blot analysis of human A431 cell lysates treated with or without EGF (100 ng/ml) using Phospho-ErbB2 (pY1139) Antibody detects a band at approximately 185 kDa in EGF-stimulated samples, consistent with the predicted molecular weight of phosphorylated ErbB2 / HER2, while untreated samples show reduced signal; parallel detection with a nonphospho ErbB2 antibody confirms total receptor expression across conditions, supporting phosphorylation-dependent signal integration at Tyr1139.



Phospho-ErbB2 (pY1139) Antibody Dot Blot Specificity. Dot blot analysis of Phospho-ErbB2 (pY1139) 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 Tyr1139. 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 key signaling pathways controlling cell growth, survival, and differentiation. Phospho-ErbB2 (pY1139) antibody, also referred to as phospho-HER2 antibody and phospho-ERBB2 antibody in the literature, detects phosphorylation at tyrosine 1139, a site associated with integration of signaling inputs within the HER2 pathway.

Phosphorylation at Y1139 occurs within the intracellular domain of HER2 and contributes to coordination of downstream signaling pathways following receptor activation. Unlike sites that primarily initiate or propagate signaling, phosphorylation at Y1139 is associated with integration of signaling events, where multiple pathway inputs are balanced and coordinated to determine cellular outcomes. This includes modulation of pathways such as PI3K/AKT and MAPK, which together regulate proliferation, survival, and differentiation.

HER2 signaling plays a critical role in tumor biology, particularly in cancers characterized by ERBB2 amplification such as breast carcinoma. In these settings, phosphorylation at Y1139 contributes to the coordination of signaling pathways that drive tumor progression and cellular adaptation. Detection of this phosphorylation event provides insight into how activated HER2 integrates multiple signaling inputs to produce a unified cellular response.

Y1139 is positioned within a phosphorylation network that includes nearby residues such as Y1112, Y1221, Y1222, and Y1248. While Y1112 contributes to adaptor recruitment and Y1221/Y1222 regulate signal propagation, Y1139 functions at the level of pathway coordination. This highlights its role in integrating signals across multiple downstream pathways rather than driving a single signaling event.

Because phosphorylation at Y1139 reflects coordinated signaling activity, it is particularly useful for studying how HER2 integrates diverse inputs under varying cellular conditions. This includes investigation of pathway crosstalk, signaling balance, and response to external stimuli or therapeutic intervention.

Phospho-specific detection of ERBB2 at Y1139 enables selective analysis of receptor activity at the level of signal integration. This complements detection of initiation, propagation, and activation sites, providing a comprehensive view of HER2 signaling behavior.

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

Application Notes

Titration of the Phospho-ErbB2 (pY1139) Antibody / Signal Integration 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 pY1139 of human HER2/ERBB2.

Storage

Aliquot the phospho-ERBB2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Phospho-ErbB2 (pY1139) antibody, phospho-HER2 Tyr1139 antibody, ERBB2 pY1139 antibody, HER2 signaling integration antibody