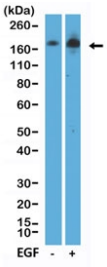
Phospho-EGFR (pTyr1068) Antibody / Receptor Activation and GRB2 Signaling Marker [clone RM443] (R20458)

Catalog No.	Formulation	Size
R20458-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM443
Purity	Protein A purified from animal origin-free supernatant
UniProt	P00533
Applications	Western Blot : 1:1000-1:4000
Limitations	This Phospho-EGFR (pTyr1068) Antibody / Receptor Activation and GRB2 Signaling Marker is available for research use only.



Phospho-EGFR (pTyr1068) Antibody A431 WB. Western blot analysis of human A431 cell lysates untreated (-) or treated (+) with epidermal growth factor (EGF) using phospho-EGFR antibody detecting EGFR phosphorylated at Tyr1068, clone RM443. A band is detected at approximately 170 kDa, consistent with the predicted molecular weight of EGFR. Signal intensity is increased in the EGF-treated sample, consistent with ligand-induced receptor activation and downstream signaling engagement.

Description

Epidermal growth factor receptor (EGFR), also known as ERBB1, is a receptor tyrosine kinase that plays a central role in regulating cell proliferation, survival, and differentiation. Phospho-EGFR (pTyr1068) Antibody, clone RM443, is designed to detect EGFR phosphorylated at tyrosine 1068, a key autophosphorylation site that mediates recruitment of adaptor proteins and activation of downstream signaling pathways. This antibody is part of our full phospho antibody collection which can be explored for additional phosphorylation-specific targets and pathway markers.

Upon ligand binding by epidermal growth factor (EGF), EGFR undergoes dimerization and activation of its intrinsic kinase activity, resulting in autophosphorylation of multiple tyrosine residues within its cytoplasmic domain. Tyr1068 is one of the most important phosphorylation sites, serving as a docking site for the adaptor protein GRB2. This interaction links EGFR activation to the RAS-RAF-MEK-ERK signaling cascade, promoting mitogenic signaling and cellular proliferation.

Phosphorylation at Tyr1068 is rapidly induced following EGF stimulation and reflects active receptor signaling. Detection of this site provides a direct readout of EGFR activation and engagement of downstream pathways. Compared to other phosphorylation sites such as Tyr1173, which is involved in recruitment of additional signaling molecules, Tyr1068 is particularly associated with GRB2-mediated signal propagation and MAPK pathway activation.

Unlike total EGFR detection, which reflects receptor expression levels, phospho-specific detection at Tyr1068 provides insight into receptor activation status and signaling activity. This makes phospho-EGFR an important marker for studying growth factor signaling, pathway dynamics, and response to targeted therapies.

Subcellularly, phosphorylated EGFR is primarily localized at the plasma membrane following ligand stimulation, with subsequent internalization into endosomal compartments. Immunohistochemistry and immunofluorescence studies often reveal membranous and cytoplasmic staining patterns consistent with receptor activation and trafficking.

Dysregulation of EGFR signaling is a hallmark of many cancers, where increased receptor activation drives tumor growth and progression. Elevated phospho-EGFR levels are associated with aggressive disease and are commonly used as biomarkers to evaluate pathway activation and therapeutic response. Detection of Tyr1068 phosphorylation is therefore widely used in cancer research and drug development.

Phospho-EGFR (pTyr1068) Antibody, clone RM443, enables selective detection of the activated form of EGFR, supporting studies of receptor signaling, MAPK pathway activation, and growth factor-induced cellular responses. Its specificity for the Tyr1068 phosphorylation site provides precise insight into EGFR signaling dynamics and pathway engagement.

Explore our EGFR Antibody (31G7) page for a broader view of EGFR expression and extensively validated antibody performance across applications.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Phospho-EGFR (pTyr1068) Antibody / Receptor Activation and GRB2 Signaling Marker (pY1068) may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

The peptide sequence surrounding human EGFR phosphorylated at position Y1068 was used as the immunogen for the Phospho-EGFR (pTyr1068) Antibody.

Storage

Store the Phospho-EGFR (pTyr1068) Antibody at -20oC.

Alternate Names

Phospho-EGFR antibody, EGFR pTyr1068 antibody, EGFR Tyr1068 antibody, phosphorylated EGFR antibody, EGFR activation marker antibody, EGFR GRB2 binding site antibody, clone RM443 antibody