

ARG30237 Phospho HER2 Antibody Duo (Total, pY877)

Package: 1 pair
Store at: -20°C

Component

Cat. No.	Component Name	Host clonality	Reactivity	Application	Package
ARG51578	anti-ERBB2 / HER2 phospho (Tyr877) antibody	Rabbit pAb	Hu, Ms, Rat	ICC/IF, IHC-P, WB	50 µl
ARG51067	anti-ERBB2 / HER2 antibody	Rabbit pAb	Hu	ICC/IF, IHC-P, WB	50 µl

Summary

Product Description	<p>Receptor tyrosine-protein kinase erbB-2, a 185 kDa protein, also known as CD340 (cluster of differentiation 340), proto-oncogene Neu, ErbB2 (rodent), or ERBB2 (human) is a protein that in humans is encoded by the ERBB2 gene. The ERBB2 gene is also frequently called HER2 (from human epidermal growth factor receptor 2) or HER2/neu.</p> <p>HER2 is a member of the epidermal growth factor receptor (EGFR/ERBB) family. HER2 has been shown to play an important role cancer development, metastasis and chemotherapeutic resistance in many kinds of multiple cancers including, breast cancer, lung cancer, gastric cancer, ovarian cancer and so on through its overexpression or mutation. HER2 is also become an important therapeutic target for cancers.</p> <p>Tyr877 is located in the activation loop of kinase domain. Phosphorylation at Tyr877 residue of Her2 is distinct from the known C-terminal tail autophosphorylation sites, and may have important implications for regulation of Her2 signaling.</p> <p>Bose et al. 2006. PNAS 103(26): 9773</p>
Target Name	HER2
Species	Human
Alternate Names	Phospho HER2 antibody; Phospho Receptor tyrosine-protein kinase erbB-2 antibody; ERBB2 / HER2 antibody; ERBB2 / HER2 phospho (Tyr877) antibody

Properties

Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	ERBB2
Gene Full Name	Phospho Receptor tyrosine-protein kinase erbB-2 (HER2) Antibody Duo
Background	Her2 gene encodes a member of the epidermal growth factor (EGF) receptor family of receptor tyrosine kinases. This protein has no ligand binding domain of its own and therefore cannot bind growth factors. However, it does bind tightly to other ligand-bound EGF receptor family members to form a

heterodimer, stabilizing ligand binding and enhancing kinase-mediated activation of downstream signalling pathways, such as those involving mitogen-activated protein kinase and phosphatidylinositol-3 kinase. Allelic variations at amino acid positions 654 and 655 of isoform a (positions 624 and 625 of isoform b) have been reported, with the most common allele, Ile654/Ile655, shown here. Amplification and/or overexpression of this gene has been reported in numerous cancers, including breast and ovarian tumors. Alternative splicing results in several additional transcript variants, some encoding different isoforms and others that have not been fully characterized. [provided by RefSeq, Jul 2008]

Function

Protein tyrosine kinase that is part of several cell surface receptor complexes, but that apparently needs a coreceptor for ligand binding. Essential component of a neuregulin-receptor complex, although neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. Regulates outgrowth and stabilization of peripheral microtubules (MTs). Upon ERBB2 activation, the MEMO1-RHOA-DIAPH1 signaling pathway elicits the phosphorylation and thus the inhibition of GSK3B at cell membrane. This prevents the phosphorylation of APC and CLASP2, allowing its association with the cell membrane. In turn, membrane-bound APC allows the localization of MACF1 to the cell membrane, which is required for microtubule capture and stabilization. In the nucleus is involved in transcriptional regulation. Associates with the 5'-TCAAATTC-3' sequence in the PTGS2/COX-2 promoter and activates its transcription. Implicated in transcriptional activation of CDKN1A; the function involves STAT3 and SRC. Involved in the transcription of rRNA genes by RNA Pol I and enhances protein synthesis and cell growth. [UniProt]

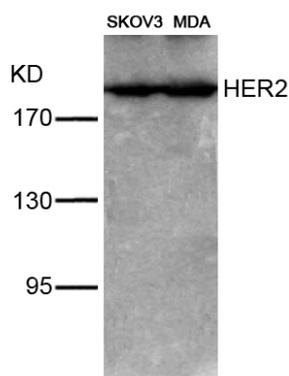
Research Area

Cancer antibody; Controls and Markers antibody; Signaling Transduction antibody

PTM

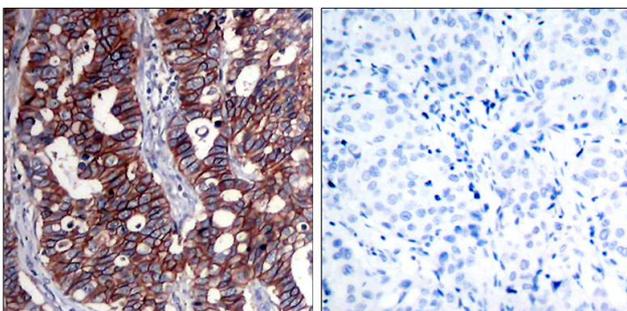
Autophosphorylated. Autophosphorylation occurs in trans, i.e. one subunit of the dimeric receptor phosphorylates tyrosine residues on the other subunit (Probable). Ligand-binding increases phosphorylation on tyrosine residues (PubMed:27134172). Signaling via SEMA4C promotes phosphorylation at Tyr-1248 (PubMed:17554007). Dephosphorylated by PTPN12 (PubMed:27134172).

Images



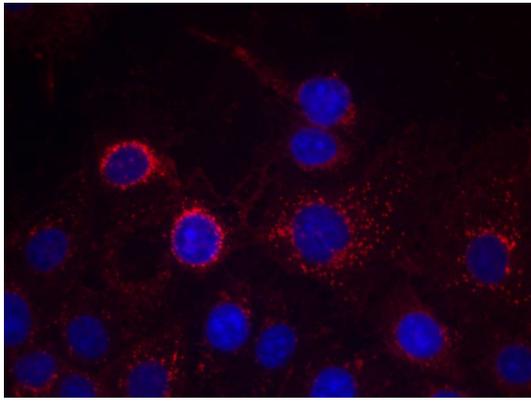
ARG51067 anti-HER2 antibody WB validated image

Western Blot: extracts from SKOV3 and MDA cells stained with anti-HER2 antibody ARG51067.



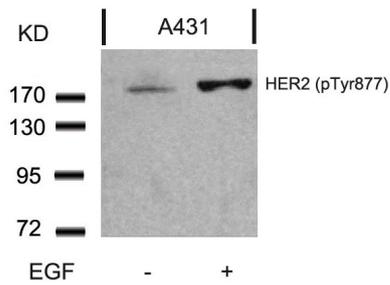
ARG51067 anti-HER2 antibody IHC-P validated image

Immunohistochemistry: paraffin-embedded human breast carcinoma tissue stained with anti-HER2 antibody ARG51067 (left) or the same antibody preincubated with blocking peptide (right).



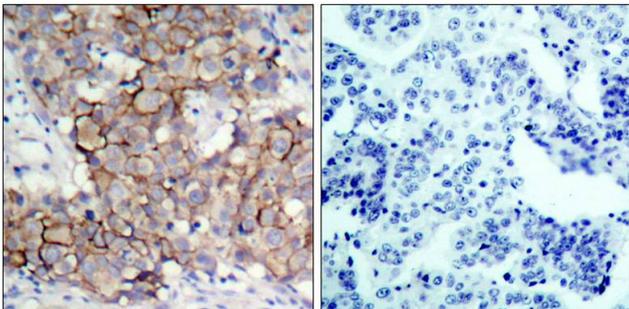
ARG51067 anti-HER2 antibody ICC/IF validated image

Immunofluorescence: methanol-fixed MCF cells stained with anti-HER2 antibody ARG51067.



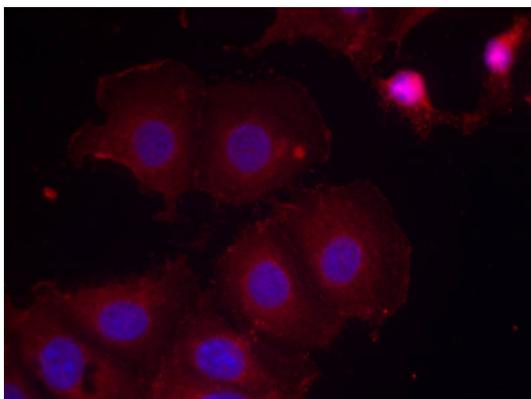
ARG51578 anti-HER2 (phospho Tyr877) antibody WB validated image

Western Blot: extracts from A431 cells untreated or treated with EGF stained with anti-HER2 (phospho Tyr877) antibody ARG51578.



ARG51578 anti-HER2 (phospho Tyr877) antibody IHC-P validated image

Immunohistochemistry: paraffin-embedded human breast carcinoma tissue, stained with anti-HER2 (phospho Tyr877) antibody ARG51578 (left) or the same antibody preincubated with blocking peptide (right).



ARG51578 anti-HER2 (phospho Tyr877) antibody ICC/IF validated image

Immunofluorescence: methanol-fixed MCF7 cells stained with anti-HER2 (phospho Tyr877) antibody ARG51578.