

Product datasheet

Recombinant human ErbB2 / HER2 protein (Active) ab60866

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Description

Product name	Recombinant human ErbB2 / HER2 protein (Active)
Biological activity	Specific Activity: 10 nmol/min/mg.
Purity	> 90 % SDS-PAGE. Purity: >90% as determined by densitometry. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Accession	<u>P04626-1</u>
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Predicted molecular weight	116 kDa
Amino acids	676 to 1255
Tags	GST tag N-Terminus
Additional sequence information	Recombinant fragment, corresponding to amino acids 676-end of Human ErbB2 / HER2.

Specifications

Our **Abpromise guarantee** covers the use of **ab60866** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Functional Studies
Form	Liquid
Additional notes	<u>ab204877</u> (Poly (4:1 Glu, Tyr) peptide) can be utilized as a substrate for assessing kinase activity

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.50
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Constituents: 0.0038% EGTA, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292% EDTA, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

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.

Tissue specificity

Expressed in a variety of tumor tissues including primary breast tumors and tumors from small bowel, esophagus, kidney and mouth.

Involvement in disease

Hereditary diffuse gastric cancer
Glioma
Ovarian cancer
Lung cancer
Gastric cancer
Chromosomal aberrations involving ERBB2 may be a cause gastric cancer. Deletions within 17q12 region producing fusion transcripts with CDK12, leading to CDK12-ERBB2 fusion leading to truncated CDK12 protein not in-frame with ERBB2.

Sequence similarities

Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily. Contains 1 protein kinase domain.

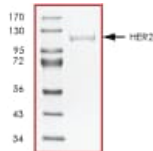
Post-translational modifications

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).

Cellular localization

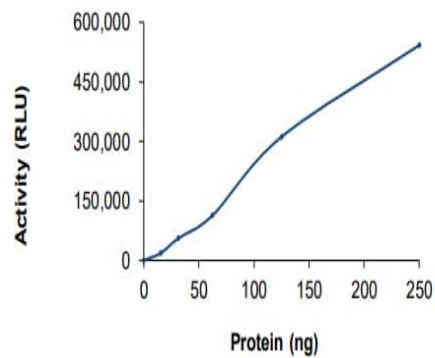
Cytoplasm. Nucleus and Cell membrane. Cytoplasm, perinuclear region. Nucleus. Translocation to the nucleus requires endocytosis, probably endosomal sorting and is mediated by importin beta-1/KPNB1.

Images



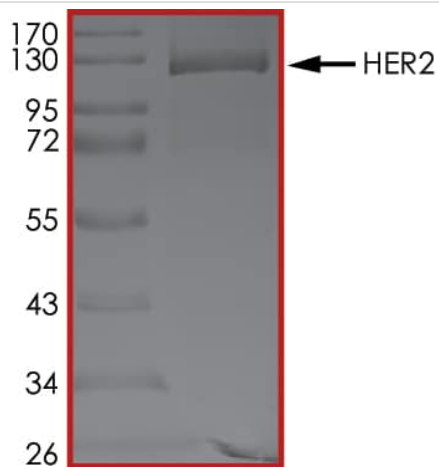
ab60866 on SDS-PAGE, MW ~116 kDa.

SDS-PAGE - Recombinant human ErbB2 / HER2 protein (Active) (ab60866)



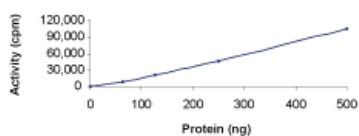
The specific activity of ErbB 2 (ab60866) was determined to be 15 nmol/min/mg as per activity assay protocol

Functional Studies - Recombinant human ErbB2 / HER2 protein (Active) (ab60866)



SDS PAGE analysis of ab60866

SDS-PAGE - Recombinant human ErbB2 / HER2 protein (Active) (ab60866)



Sample Kinase Activity Plot.

Functional Studies - Recombinant human ErbB2 / HER2 protein (Active) (ab60866)

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