abcam

Product datasheet

Recombinant human ErbB2 / HER2 protein (Active) ab269979

2 Images

Description

Product name	Recombinant human ErbB2 / HER2 protein (Active)
Biological activity	Activity ≥40 pmole/min/µg. Assay was done in Kinase buffer containing 2 mM DTT using Poly- (Glu:Tyr) substrate (0.2 mg/ml) and 20 µM ATP. Reaction was done at 30^{o}C for 45 min.
Purity	>= 43 % SDS-PAGE. Affinity purified.
Expression system	Sf9 cells
Accession	**P04626**
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	QQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKET ELRKVKVLGS GAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDE AYVMAGVG SPYVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLG SQDLLNWCMQ IAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARL LDIDETEYH ADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMT FGAKPYDGIPA REIPDLLEKGERLPQPPICTIDVYMIMVKCWMIDSECRPRF RELVSEFSR MARDPQRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDL VDAEEYLVPQQ GFFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPS EEEAPRSPLAPS EGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDP TVPLPSETDGYV APLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPAGATL ERPKTLSPGKN

GVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPA
FDNLYYWDQDPP ERGAPPSTFKGTPTAENPEYLGLDVPV

Predicted molecular weight	89 kDa including tags
Amino acids	679 to 1255
Tags	GST tag N-Terminus
Additional sequence information	NM_004448

Specifications

Our **Abpromise guarantee** covers the use of **ab269979** in the following tested applications.

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

Applications	Functional Studies SDS-PAGE
Form	Liquid

Preparation and Storage

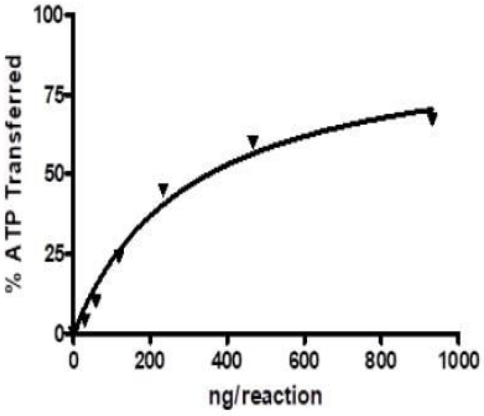
Stability and Storage	Shipped on Dry Ice. Store at -80°C. Avoid freeze / thaw cycle. pH: 8.00 Constituents: 0.63% Tris HCl, 0.64% Sodium chloride, 0.02% Potassium chloride, 20% Glycerol (glycerin, glycerine), 0.61% Glutathione, 0.05% (R*,R*)-1,4-Dimercaptobutan-2,3-diol This product is an active protein 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.

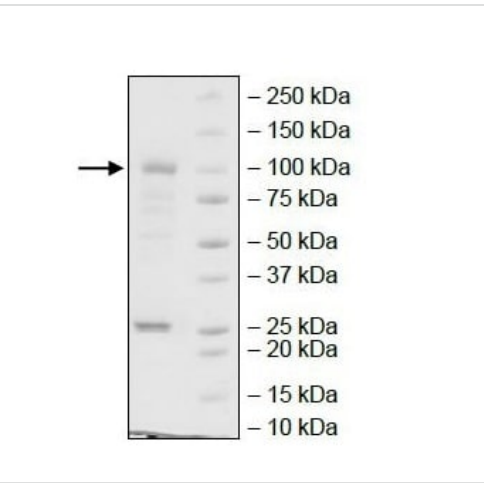
Images



Functional Studies - Recombinant human ErbB2 / HER2 protein (Active) (ab269979)

Activity ≥40 pmole/min/µg.

Assay was performed in Kinase buffer containing 2 mM DTT using Poly- (Glu:Tyr) substrate (0.2 mg/ml) and 20 µM ATP. Reaction was done at 30^{o}C for 45 min.



SDS-PAGE - Recombinant human ErbB2 / HER2 protein (Active) (ab269979)

SDS-PAGE analysis of ab269979 (2 µg) on a 4-20% gel with Coomassie staining.

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