

Active Recombinant Human ERBB2, His-tagged, Biotinylated

Cat. No. ERBB2-182H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human HER2/ErbB2/CD340 Protein (AAA75493, 23-652aa), was expressed in human 293 cells (HEK293) with biotin conjugate (labeled with biotin based on rhHER2 Protein).
Species	Human
Source	HEK293
ProteinLength	23-652 aa
Description	Human Epidermal growth factor Receptor 2 (HER2),also called ERBB2, HER-2,HER-2/neu, NEU, NGL,TKR1 and c-erb B2,and is a protein giving higher aggressiveness in breast cancers. It is a member of the ErbB protein family, more commonly known as the epidermal growth factor receptor family. HER2 is a cell membrane surface-bound receptor tyrosine kinase and is normally involved in the signal transduction pathways leading to cell growth and differentiation. HER2 is thought to be an orphan receptor, with none of the EGF family of ligands able to activate it. Approximately 30% of breast cancers have an amplification of the HER2 gene or overexpression of its protein product. Overexpression of this receptor in breast cancer is associated with increased disease recurrence and worse prognosis. HER2 appears to play roles in development, cancer,communication at the neuromuscular junction andregulation of cell growth and differentiation.The primary amine of rh HER2 was labeled by biotin without decreasing its bioactivity, and has been used successfully for easy detection in ELISA, dot blot or Western blot, immunohistochemistry applications using

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	streptavidin or avidin-conjugated probes. Biotin and other reactive related chemicals have been removed thoroughly by desalting after reaction termination.
Predicted N Terminal	Thr 23
Form	Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally Trehalose are added as protectants before lyophilization.
Bio-activity	Measured by its binding ability in a functional ELISA. Immobilized Herceptin at 0.5 µg/mL (100 µL/well) can bind biotinylated HER2 with a linear range of 0.1-1 µg/mL when detected by HRP*-Labeled Streptavidin.
Molecular Mass	Biotinylated rh HER2 is fused with polyhistidine tag at the C-terminus, and has a calculated MW of 72.4 kDa. The predicted N-terminus is Thr 23. DTT-reduced Protein migrates as 90-110 kDa in SDS-PAGE due to glycosylation. The primary amine of Biotinylated
Endotoxin	Less than 1.0 EU per µg of the Biotinylated rh HER2 by the LAL method.
Purity	>95% as determined by reduced SDS-PAGE.
Applications	Biotin Labeled Protein
Storage	Avoid repeated freeze-thaw cycles.No activity loss was observed after storage at:In lyophilized state for 1 year (4oC); After reconstitution under sterile conditions for 3 months (-70oC).
Conjugation	Biotin

GENE INFORMATION

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Gene Name	ERBB2 v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian) [Homo sapiens]
Official Symbol	ERBB2
Synonyms	ERBB2; v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian); NGL, v erb b2 avian erythroblastic leukemia viral oncogene homolog 2 (neuro/glioblastoma derived oncogene homolog); receptor tyrosine-protein kinase erbB-2; CD340; HER 2; HER2; NEU; herstatin; p185erbB2; proto-oncogene Neu; c-erb B2/neu protein; proto-oncogene c-ErbB-2; metastatic lymph node gene 19 protein; tyrosine kinase-type cell surface receptor HER2; neuroblastoma/glioblastoma derived oncogene homolog; v-erb-b2 avian erythroblastic leukemia viral oncogene homolog 2 (neuro/glioblastoma derived oncogene homolog); NGL; TKR1; HER-2; MLN 19; HER-2/neu;
Gene ID	2064
mRNA Refseq	NM_001005862
Protein Refseq	NP_001005862
MIM	164870
UniProt ID	P04626
Chromosome Location	17q11.2-q12
Pathway	Adherens junction, organism-specific biosystem; Adherens junction, conserved biosystem; Alpha6-Beta4 Integrin Signaling Pathway, organism-specific biosystem; Axon guidance, organism-specific biosystem; Bladder cancer, organism-specific

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biosystem; Bladder cancer, conserved biosystem; Calcium signaling pathway, organism-specific biosystem;

Function

ATP binding; ErbB-3 class receptor binding; Hsp90 protein binding; RNA polymerase I core binding; epidermal growth factor-activated receptor activity; glycoprotein binding; contributes_to growth factor binding; identical protein binding; nucleotide bindin

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