

## HER2/CD340 Protein, Human (630a.a, HEK293, Fc)

<b>Cat. No.:</b>	HY-P70759
<b>Synonyms:</b>	Receptor tyrosine-protein kinase erbB-2; Metastatic lymph node gene 19 protein; Proto-oncogene Neu; Tyrosine kinase-type cell surface receptor HER2; ERBB2; MLN19; NGL; TKR1
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P04626 (T23-T652)
<b>Gene ID:</b>	2064
<b>Molecular Weight:</b>	120-145 kDa

### PROPERTIES

#### AA Sequence

TQVCTGTD MK	LRLPASPETH	LDMLRHLYQG	CQVVQGNLEL
TYLPTNASLS	FLQDIQEVQG	YVLI AHNQVR	QVPLQRLRIV
RGTQLFEDNY	ALAVLDNGDP	LNNTTPVTGA	SPGGLRELQL
RSLTEILKGG	VLIQRNPQLC	YQDTILWKDI	FHKNNQLALT
LIDTNRSRAC	HPCSPMCKGS	RCWGESSEDC	QSLTRTV CAG
GCARCKGPLP	TDCCHEQCAA	GCTGPKHSDC	LACLHFNHSG
ICELHCPALV	TYNTDTFESM	PNPEGRYTFG	ASCVTACPYN
YLSTDVGSCT	LVCPLHNQEV	TAEDGTQRCE	KCSKPCARVC
YGLGMEHLRE	VRAVTSANIQ	E FAGCKKIFG	SLAFLPESFD
GDPASNTAPL	QPEQLQVFET	LEEITGYLYI	SAWPDSL PDL
SVFQNLQVIR	GRI LHNGAYS	LTLQGLGISW	LGLRSLREL G
SGLALIH HNT	HLCFVHTVPW	DQLFRNPHQA	LLHTANRPED
ECVGEGLACH	QLCARGHCWG	PGPTQCVNCS	QFLRGQECVE
ECRVLQGLPR	EYVNARHCLP	CHPECQPQNG	SVTCFGPEAD
QC VACAHYKD	PPFCVARCPS	GVKPDL SYMP	IWKFPDEEGA
CQPCPINCTH	SCVDLDDKGC	PAEQRASPLT	

**Biological Activity** The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

**Appearance** Lyophilized powder.

**Formulation** Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.

**Endotoxin Level** <1 EU/µg, determined by LAL method.

**Reconstitution** It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH<sub>2</sub>O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

**Storage & Stability** Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

**Shipping**

Room temperature in continental US; may vary elsewhere.

**DESCRIPTION****Background**

HER2/CD340 Protein, a dynamic protein tyrosine kinase, stands as a pivotal component within diverse cell surface receptor complexes, requiring a coreceptor for efficient ligand binding. Crucially, it plays an indispensable role as part of the neuregulin-receptor complex, with GP30 identified as a potential ligand for this receptor. Beyond its receptor functions, HER2/CD340 Protein intricately regulates the outgrowth and stabilization of peripheral microtubules (MTs). Upon activation, the MEMO1-RHOA-DIAPH1 signaling pathway, initiated by ERBB2 activation, orchestrates the phosphorylation and subsequent inhibition of GSK3B at the cell membrane. This strategic inhibition prevents the phosphorylation of APC and CLASP2, facilitating their association with the cell membrane. Notably, membrane-bound APC enables the localization of MACF1 to the cell membrane, a prerequisite for microtubule capture and stabilization. Within the nucleus, HER2/CD340 Protein is actively involved in transcriptional regulation, associating with the 5'-TCAAATTC-3' sequence in the PTGS2/COX-2 promoter to activate transcription. Furthermore, its engagement in the transcription of rRNA genes by RNA Pol I enhances protein synthesis, contributing to overall cell growth. The multifaceted activities of HER2/CD340 Protein underscore its central role in orchestrating diverse cellular processes, ranging from receptor signaling to microtubule dynamics and transcriptional regulation.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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