Her2/CD340 Protein, Human (Biotinylated, HEK293, His)

Cat. No.:	HY-P78882
Synonyms:	ERBB2; CD340; HER-2; neu; HER2; MLN19; NEU; NGL; TKR1
Species:	Human
Source:	HEK293
Accession:	P04626 (T23-T652)
Gene ID:	2064
Molecular Weight:	80-110 kDa

PROPERTIES

AA Sequence

TQVCTGTDMK	LRLPASPETH	LDMLRHLYQG	CQVVQGNLEL
TYLPTNASLS	FLQDIQEVQG	YVLIAHNQVR	QVPLQRLRIV
RGTQLFEDNY	ALAVLDNGDP	LNNTTPVTGA	SPGGLRELQL
RSLTEILKGG	VLIQRNPQLC	YQDTILWKDI	FHKNNQLALT
LIDTNRSRAC	HPCSPMCKGS	RCWGESSEDC	QSLTRTVCAG
GCARCKGPLP	TDCCHEQCAA	GCTGPKHSDC	LACLHFNHSG
ICELHCPALV	TYNTDTFESM	PNPEGRYTFG	ASCVTACPYN
YLSTDVGSCT	LVCPLHNQEV	TAEDGTQRCE	KCSKPCARVC
YGLGMEHLRE	VRAVTSANIQ	EFAGCKKIFG	SLAFLPESFD
GDPASNTAPL	QPEQLQVFET	LEEITGYLYI	SAWPDSLPDL
SVFQNLQVIR	GRILHNGAYS	LTLQGLGISW	LGLRSLRELG
SGLALIHHNT	HLCFVHTVPW	DQLFRNPHQA	LLHTANRPED
ECVGEGLACH	QLCARGHCWG	PGPTQCVNCS	QFLRGQECVE
ECRVLQGLPR	EYVNARHCLP	CHPECQPQNG	SVTCFGPEAD
QCVACAHYKD	PPFCVARCPS	GVKPDLSYMP	IWKFPDEEGA
CQPCPINCTH	SCVDLDDKGC	PAEQRASPLT	

Biological Activity

1. Immobilized Anti-Her2 Antibody, hFc Tag at 0.5 μg/mL (100 μl/Well) on the plate. Dose response curve for Biotinylated Human Her2, His Tag with the EC_{50} of 10 ng/mL determined by ELISA.
2. Measured by its ability to block anti-ErbB2 mediated inhibition of SK-BR-3 human breast cancer cell proliferation. The ED_{50} this effect is 0.5829 μg/mL in the presence of 0.6 μg/mL Trastuzmab, corresponding to a specific activity is 1.72×10^3 units/mg.

Appearance

Lyophilized powder.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Endotoxin Level

<1 EU/μg, determined by LAL method.

Reconsititution

It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.

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.

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