HER2/CD340 Protein, Human (142a.a, HEK293, His)

Cat. No.:	HY-P73095
Synonyms:	Receptor tyrosine-protein kinase erbB-2; MLN 19; CD340; ERBB2; HER2; NEU; NGL
Species:	Human
Source:	HEK293
Accession:	P04626/NP_004439.2 (P489-C630)
Gene ID:	2064
Molecular Weight:	Approximately 27 kDa

PROPERTIES

AA Sequence	P H Q A L L H T A N R P E D E C V G E G L A C H Q L C A R G H C W G P G P T Q C V N C S Q F L R G Q E C V E E C R V L Q G L P R E Y V N A R H C L P C H P E C Q P Q N G S V T C F G P E A D Q C V A C A H Y K D P P F C V A R C P S G V K P D L S Y M P I W K F P D E E G A C Q P C P I N C
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. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
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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