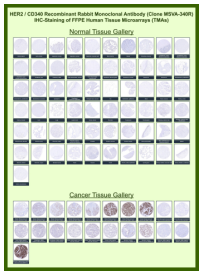
HER2 Antibody / Erb-B2 receptor tyrosine kinase 2 [clone MSVA-340R] (V6152)

Catalog No.	Formulation	Size
V6152-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6152-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-340R
UniProt	P04626
Localization	Cell membrane, Cytoplasm, Early endosome, Nucleus, Perinuclear region
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This HER2/Erb-B2 receptor tyrosine kinase 2 antibody is available for research use only.



Immunohistochemistry overview of HER2 expression in human tissue microarrays. Formalin-fixed, paraffin-embedded human tissue microarrays stained with HER2 antibody (clone MSVA-340R) show minimal to absent staining across the majority of normal tissues, while variable membranous staining is observed in selected epithelial tumor samples, most prominently within subsets of breast and gastric carcinoma cores. Normal tissue cores display little to no specific signal under the conditions tested, consistent with restricted expression of Erb-B2 receptor tyrosine kinase 2 in non-malignant tissues. Antigen retrieval was performed using heat-induced epitope retrieval prior to immunostaining, followed by chromogenic detection.
Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Description

HER2 antibody is used to study Erb-B2 receptor tyrosine kinase 2, a member of the epidermal growth factor receptor family that plays a central role in cell growth and signal transduction. Erb-B2 receptor tyrosine kinase 2 is encoded by the ERBB2 gene and is characterized by an extracellular receptor domain, a single transmembrane region, and an intracellular tyrosine kinase domain. Unlike other EGFR family members, this receptor does not bind ligand directly and instead functions as a preferred heterodimerization partner that amplifies downstream signaling activity.

Erb-B2 receptor tyrosine kinase 2 is also widely known as HER2, a name that is deeply embedded in the cancer biology literature. The protein has also been referred to as Neu and CD340 in earlier studies and immunological contexts. These alternative designations reflect the long history of research surrounding this receptor and its role in epithelial cell signaling. Use of a HER2 antibody supports investigation across this broad literature landscape, from receptor biology to signal integration at the plasma membrane.

HER2 localizes predominantly to the cell membrane, where it participates in the formation of receptor complexes that activate signaling pathways such as MAPK and PI3K-AKT. Through these pathways, Erb-B2 receptor tyrosine kinase 2 regulates cellular proliferation, differentiation, and survival. Studies using HER2 antibody have been instrumental in defining receptor distribution, membrane organization, and signaling context in epithelial tissues and tumor-derived cell models.

Expression of Erb-B2 receptor tyrosine kinase 2 is normally low in many adult tissues but is frequently increased in certain epithelial malignancies. Amplification or overexpression of ERBB2 has been extensively documented in subsets of breast and gastric cancers and is associated with altered receptor signaling dynamics. Detection of HER2 expression using a HER2 antibody enables research into receptor-driven signaling, epithelial tumor biology, and pathway activation without implying diagnostic or therapeutic use.

HER2 antibody is designed to detect Erb-B2 receptor tyrosine kinase 2 in research applications. Analysis of ERBB2 expression provides insight into membrane-associated signaling mechanisms, receptor complex formation, and disease-associated changes in epithelial signaling networks. Erb-B2 receptor tyrosine kinase 2 remains a key molecule for studying growth factor receptor biology and signal amplification in epithelial systems.

Application Notes

1. Optimal dilution of the HER2/Erb-B2 receptor tyrosine kinase 2 antibody should be determined by the researcher.

2. This HER2/Erb-B2 receptor tyrosine kinase 2 antibody is recombinantly produced by expression in human HEK293 cells.

Immunogen

Recombinant protein encoding the extracellular domain of human c-erbB2 was used as the immuongen for the HER2/Erb-B2 receptor tyrosine kinase 2 antibody.

Storage

HER2/Erb-B2 receptor tyrosine kinase 2 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.