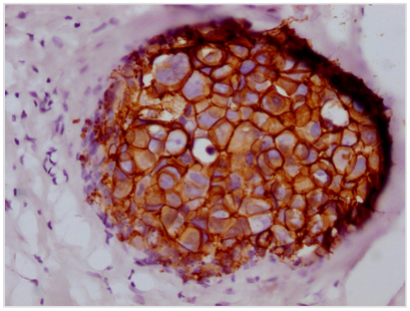
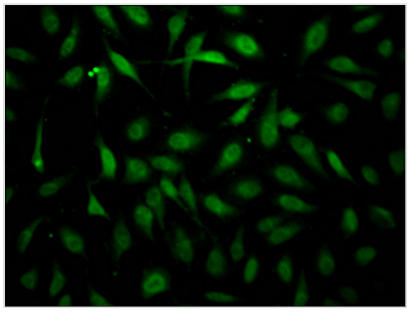
ERBB2 Recombinant Monoclonal Antibody

Product Code	CSB-RA260392A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P04626
Immunogen	A synthesized peptide derived from human ErbB2 (HER2)
Species Reactivity	Human
Tested Applications	ELISA, IHC, IF; Recommended dilution: IHC:1:50-1:200, IF:1:20-1:200
Relevance	Protein tyrosine kinase that is part of several cell surface receptor complexes, but that apparently needs a coreceptor for ligand binding. Essential component of a neuregulin-receptor complex, although neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. Regulates outgrowth and stabilization of peripheral microtubules (MTs). Upon ERBB2 activation, the MEMO1-RHOA-DIAPH1 signaling pathway elicits the phosphorylation and thus the inhibition of GSK3B at cell membrane. This prevents the phosphorylation of APC and CLASP2, allowing its association with the cell membrane. In turn, membrane-bound APC allows the localization of MACF1 to the cell membrane, which is required for microtubule capture and stabilization.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cancer; Tags & Cell Markers; Immunology; Signal transduction
Gene Names	ERBB2
Clone No.	5F6

Image



IHC image of CSB-RA260392A0HU diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



Immunofluorescence staining of Hela Cells with CSB-RA260392A0HU at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeated by 0.2% TritonX-100, and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. Nuclear DNA was labeled in blue with DAPI. The secondary antibody was FITC-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).

Description

B lymphocytes were isolated from the animal inoculated with a synthetic peptide derived from human ERBB2 and were fused with myeloma cells to generate hybridomas. The variable light and variable heavy domains of ERBB2 antibody-producing hybridomas were sequenced to construct a vector for the recombinant generation. Subsequently, the ERBB2 monoclonal antibody gene-containing vector was transfected into cells for cultivation, and the ERBB2 recombinant monoclonal antibody was isolated and purified using affinity chromatography from the cell culture supernatant. The purified antibody was specifically tested for human ERBB2 protein detection in ELISA, IHC, and IF applications.

The ERBB2 protein, also known as HER2, is a transmembrane receptor tyrosine kinase that plays a role in cell growth, division, and differentiation. When activated by binding of its ligands, such as heregulin or neuregulin, ERBB2 forms heterodimers with other members of the EGFR family, leading to the activation of downstream signaling pathways such as the MAPK/ERK and PI3K/Akt pathways. Overexpression or amplification of the ERBB2 gene is associated with various cancers, including breast, ovarian, and gastric cancer. In these cancers, the increased expression of ERBB2 leads to enhanced signaling through its downstream pathways, promoting cell proliferation, survival, and migration.