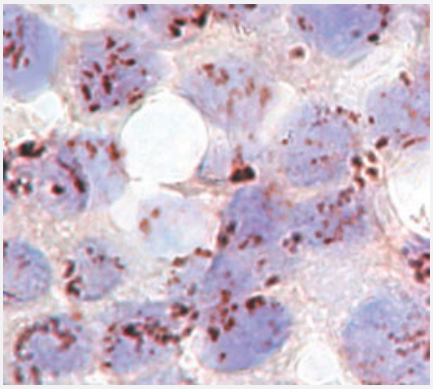
ERBB2 CISH Probe

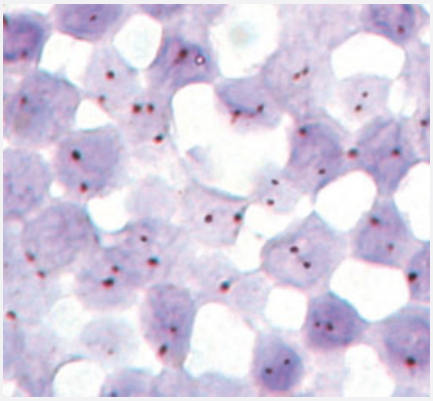
Catalog # CG0018 Size 400 uL

Applications



Chromogenic *In Situ* Hybridization (FFPE Tissue)

Breast carcinoma tissue section with ERBB2 amplification.



Chromogenic *In Situ* Hybridization (FFPE Tissue)

Normal nuclei each with two ERBB2 signals.

Specification

Product Description	ERBB2 CISH Probe is designed for the qualitative detection of human ERBB2 gene in formalin-fixed , paraffin-embedded specimens by chromogenic *in situ* hybridization (CISH).
Reactivity	Human
Recommend Usage	The product is ready-to-use. No reconstitution, mixing, or dilution is required. Bring probe to room te mperature (18-25°C) and mix briefly before use.

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Supplied Product	Reagent Provided: 1. Digoxigenin-labeled polynucleotides targeting sequences mapping in 17q12* (chr17:37,725,661-37,973,541) harboring the ERBB2 gene 2. Formamide based hybridization buffer *according to Human Genome Assembly GRCh37/hg19
Probe Position	
Regulatory Status	For research use only (RUO)
Storage Instruction	Store at 2-8°C in an upright position. Return to storage conditions immediately after use.
Note	The probe is intended to be used in combination with the CISH Implementation Kit 1 (Catalog #: KA5365), which provides necessary reagents for specimen pretreatment and post-hybridization processing. Hybridization signals of digoxigenin-labeled polynucleotides appear as brown- to dark brown colored distinct dots (ERBB2 gene region). Normal situation: In interphases of normal cells or cells without an amplification involving the ERBB2 gene locus, two distinct dot-shaped brown signals per nuclei appear. Aberrant situation: In a cell with amplification of the ERBB2 gene locus or polysomy of chromosome 17, multiple copies of the brown signal or brown signal clusters will be observed. Other signal distribution may be observed in some abnormal samples which might result in a different signal pattern than described above, indicating variant rearrangements. Unexpected signal patterns should be further investigated.
Interpretation of Result	

Applications

- Chromogenic *In Situ* Hybridization (FFPE Tissue)

  Breast carcinoma tissue section with ERBB2 amplification.

- Chromogenic *In Situ* Hybridization (FFPE Tissue)

  Normal nuclei each with two ERBB2 signals.

Gene Info — ERBB2

Entrez GeneID	2064
Gene Name	ERBB2
Gene Alias	CD340, HER-2, HER-2/neu, HER2, NEU, NGL, TKR1

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Gene Description	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)
Omim ID	137215 137800 164870 211980
Gene Ontology	Hyperlink
Gene Summary	This gene encodes a member of the epidermal growth factor (EGF) receptor family of receptor tyrosine kinases. This protein has no ligand binding domain of its own and therefore cannot bind growth factors. However, it does bind tightly to other ligand-bound EGF receptor family members to form a heterodimer, stabilizing ligand binding and enhancing kinase-mediated activation of downstream signalling pathways, such as those involving mitogen-activated protein kinase and phosphatidylinositol-3 kinase. Allelic variations at amino acid positions 654 and 655 of isoform a (positions 624 and 625 of isoform b) have been reported, with the most common allele, Ile654/Ile655, shown here. Amplification and/or overexpression of this gene has been reported in numerous cancers, including breast and ovarian tumors. Alternative splicing results in several additional transcript variants, some encoding different isoforms and others that have not been fully characterized. [provided by RefSeq
Other Designations	c-erb B2/neu protein|erbB-2|herstatin|neuroblastoma/glioblastoma derived oncogene homolog|v-erb-b2 avian erythroblastic leukemia viral oncogene homolog 2 (neuro/glioblastoma derived oncogene homolog)

Pathway

- Adherens junction
- Bladder cancer
- Calcium signaling pathway
- Endometrial cancer
- ErbB signaling pathway
- Focal adhesion
- Non-small cell lung cancer
- Pancreatic cancer
- Pathways in cancer
- Prostate cancer

Disease

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- Adenocarcinoma
- Ataxia telangiectasia
- Brain Neoplasms
- Breast cancer
- Breast Neoplasms
- Carcinoma
- Cell Transformation
- Cleft Lip
- Cleft Palate
- Colorectal Neoplasms
- Disease Progression
- Endometrial Neoplasms
- Esophageal Neoplasms
- Fibroadenoma
- Gastritis
- Genetic Predisposition to Disease
- Glioma
- Head and Neck Neoplasms
- Heart Diseases
- Kidney Failure
- Laryngeal Neoplasms
- Lung Neoplasms
- Lymphatic Metastasis
- Mouth Neoplasms
- Neoplasm Invasiveness
- Neoplasm Metastasis

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- Neoplasm Recurrence
- Neoplasms
- Obesity
- Ovarian cancer
- Ovarian Neoplasms
- Pancreatic cancer
- Pancreatic Neoplasms
- Papillomavirus Infections
- Pharyngeal Neoplasms
- Prostate cancer
- Prostatic Hyperplasia
- Prostatic Neoplasms
- Pulmonary Disease
- Skin Neoplasms
- Stomach Neoplasms
- Thyroid Neoplasms
- Tooth Abnormalities
- Urinary Bladder Neoplasms
- Uterine Cervical Neoplasms
- Werner syndrome

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