

## HER2/neu

Format	Catalog No.	Pack size	Dilution
Concentrated	GB 3274 A, B,C	0.1, 0.5,1.0mL	1:100
Prediluted	GB 3274 AA	6.0 mL	Ready to use

### PRODUCT DESCRIPTION -

HER2/neu, also known as Human Epidermal Growth Factor Receptor 2 (HER2), is a protein that is overexpressed in certain types of cancer, particularly breast cancer. The HER2/neu primary antibody is used in laboratory tests to detect the presence of HER2 in cancer cells, which helps in diagnosing and guiding treatment decisions, especially in breast cancer.

HER2 is a receptor on the surface of cells that, when activated, stimulates cell growth. In normal cells, HER2 plays a role in regulating cell division and growth. However, in some cancers, especially breast cancer, HER2 is overexpressed or amplified, leading to uncontrolled cell division and tumor growth.

A primary antibody specifically targets and binds to the HER2 protein. When this antibody is applied to tissue samples (such as breast cancer biopsies), it binds to the HER2 protein on the surface of cells, allowing for its detection under a microscope or through laboratory analysis. This binding can be visualized using different techniques, such as immunohistochemistry (IHC) or enzyme-linked immunosorbent assay (ELISA).

### INTENDED USE -

Intended for RESEARCH USE ONLY.

### SUMMARY AND EXPLANATION -

HER2/neu, also known as Human Epidermal Growth Factor Receptor 2 (HER2), is a protein that is overexpressed in certain types of cancer, particularly breast cancer. The HER2/neu primary antibody is used in laboratory tests to detect the presence of HER2 in cancer cells, which helps in diagnosing and guiding treatment decisions, especially in breast cancer.

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#### **PRINCIPLE OF PROCEDURE -**

Antigen detection in tissues and cells is a multi-step immunohistochemistry procedure. The first step attaches the primary antibody to its designated epitope. A secondary antibody may be utilized to bind the primary antibody, followed by the application of an enzyme-labeled polymer; alternatively, an enzyme-labeled polymer may be administered immediately to bind the primary antibody. The identification of the bound primary antibody is demonstrated by an enzyme-catalyzed colorimetric reaction.

**SOURCE -** Mouse monoclonal

**SPECIES REACTIVITY -** Human; others not tested

**CLONE -** IHC042

**ISOTYPE -** IgG2a

**PROTEIN CONCENTRATION -** ~10 mg/ml. Call for lot specific Ig concentration.

**EPITOPE/ANTIGEN -** HER2/neu

**CELLULAR LOCALISATION -** Membrane

**POSITIVE TISSUE CONTROL -** Breast carcinoma known to be HER2 positive

#### **KNOWN APPLICATIONS-**Immunohistochemistry

30-40 min. At RT. Staining of formalin-fixed tissues requires heating tissue sections in between pH 7.4 - 9.0 for 45 min at 95°C followed by cooling at room temperature for 20 minutes.

**SUPPLIED AS -** Buffer with protein carrier and preservative

#### **STORAGE AND STABILITY -**

Store at 2°C to 8°C. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user.

Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C

**Materials required but not provided -**

- 1) Positive tissue control - Breast carcinoma known to be HER2 positive
- 2) Negative control tissue(internal or external)
- 3) Microscope slides and coverslips
- 4) Staining jars or baths
- 5) Timer
- 6) Xylene or xylene substitute
- 7) Ethanol or reagent alcohol
- 8) Deionized or distilled water
- 9) Heating equipment or enzyme for tissue pretreatment step
- 10)Detection system
- 11)Chromogen
- 12)Wash buffer
- 13)Hematoxylin
- 14)Antibody diluents
- 15)Peroxide block
- 16)Light microscope
- 17)Mounting medium

**LIMITATIONS -**

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Genebio products. Ultimately, it is the responsibility of the investigator to determine optimal conditions.



