

# Anti-HER2-Tra-hIgA2

Monoclonal human IgA2 antibody against HER2/neu

Catalog # her2tra-mab7

For research use only, not for diagnostic or therapeutic use

Version # 15F11-MT

## PRODUCT INFORMATION

**Content:** 100 µg anti-HER2-Tra-hIgA2, purified antibody, provided azide-free and lyophilized.

**Specificity:** Human epidermal growth factor receptor 2 (HER2)

**Isotype:** Human IgA2

**Source:** CHO cells

**Formulation:** 0.2 µm filtered solution in a sodium phosphate buffer with glycine, saccharose and stabilizing agents.

### Antibody resuspension

Add 1 ml of sterile water to obtain a concentration of 0.1 mg/ml.

### Storage

- Product is shipped at room temperature. Store lyophilized antibody at -20 °C. Lyophilized product is stable for at least 1 year.

- Reconstituted antibody is stable for 1 month when stored at 4 °C and for 1 year when aliquoted and stored at -20 °C. Avoid repeated freeze-thaw cycles.

### Quality control

- Binding of Anti-HER2-Tra-hIgA2 to HER2 has been tested using flow cytometry.

- The complete sequence of this antibody has been verified.

- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

## DESCRIPTION

Anti-HER2-Tra-hIgA2 features the constant region of the human IgA2 isotype and the variable region of trastuzumab. Trastuzumab is a humanized IgG1 monoclonal antibody that targets the human epidermal growth factor receptor 2 (HER2, also known as HER2/neu or ERBB2) that is found on the cell membrane of epithelial cells. HER2 plays an important role in normal cell growth and differentiation<sup>1</sup>. However, in certain types of cancers, particularly in breast and ovarian cancers, HER2 is over-expressed and causes uncontrollable cell proliferation. Binding of trastuzumab to HER2 results in cell death through different mechanisms including antibody-dependent cell-mediated cytotoxicity and phagocytosis<sup>2, 3</sup>. Trastuzumab has been approved by the FDA for the treatment of breast cancer.

Anti-HER2-Tra-hIgA2 was generated by recombinant DNA technology. It has been produced in CHO cells and purified by affinity chromatography with peptide M.

1. Rubin I. & Yarden Y. 2001. The basic biology of HER2. Ann Oncol.12 Suppl 1:S3-8.
2. Collins DM. et al., 2012. Trastuzumab induces antibody-dependent cell-mediated cytotoxicity (ADCC) in HER-2-non-amplified breast cancer cell lines. Ann Oncol. 23(7):1788-95.
3. Petricevic B. et al., 2013. Trastuzumab mediates antibody-dependent cell-mediated cytotoxicity and phagocytosis to the same extent in both adjuvant and metastatic HER2/neu breast cancer patients. J Transl Med. 11:307.

## ANTIBODY ISOTYPE FAMILY

For your research, InvivoGen provides an anti-HER2-Tra isotype family. This family consists of monoclonal antibodies comprising the variable region of trastuzumab, and the constant region of three different human isotypes; IgG1, IgG4 and IgA2. The isotypes differ in their functional locations and effector functions, such as complement-dependent cytotoxicity (CDC) and antibody-dependent cell-mediated cytotoxicity (ADCC), as presented in the table below.

Isotype	Description
Human IgG1	Most abundant IgG present in serum High CDC, high ADCC
Human IgG4	Least common IgG present in serum No CDC, low ADCC
Human IgA2	Major class in secretions, oligomeric forms, highly resistant to enzymatic degradation. No CDC, low ADCC

## RELATED PRODUCTS

Product	Catalog Code
Anti-HER2-Tra-hIgG1 (Trastuzumab)	her2tra-mab1
Anti-HER2-Tra-hIgG4S228P	her2tra-mab14

Other antibody isotype families are available, such as Anti-hCD20, Anti-hPD1 and Anti-β-Gal (control).

For more information visit [www.invivogen.com/antibody-isotypes](http://www.invivogen.com/antibody-isotypes)

## TECHNICAL SUPPORT

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