**Human Anti-Her2/neu E75 peptide vaccine ELISA Kits**

HER2 (Human Epidermal Growth Factor Receptor 2) also known as Neu, ErbB-2, CD340 (cluster of differentiation 340) or p185 is a protein that in humans is encoded by the ERBB2 gene. Neu is so named because it was derived from a rodent glioblastoma cell line, a type of neural tumor. HER2 is named because it has a similar structure to human epidermal growth factor receptor, or HER1. HER2 is a member of the epidermal growth factor receptor (EGFR/ErbB) family. Amplification or over-expression of this gene has been shown to play an important role in the pathogenesis and progression of certain aggressive types of breast cancer and in recent years it has evolved to become an important biomarker and target of therapy for the disease.

HER2 is the target of the monoclonal antibody trastuzumab (Herceptin). Trastuzumab is effective only in cancers where HER2 is over-expressed. Herceptin is fully humanized mab (IgG1 kappa) produced in CHO cell culture. It binds to the domain IV of the extracellular segment of the HER2/neu receptor. Trastuzumab has had a major impact in the treatment of HER2-positive metastatic breast cancer. The combination of Trastuzumab with chemotherapy has been shown to increase both survival and response rate, in comparison to Trastuzumab alone. Herceptin costs about $100,000 for a full treatment. Another monoclonal antibody, Pertuzumab (2C4 or Omnitarg), which inhibits dimerization of HER2 and HER3 receptors, is in advanced clinical trials. Other approaches such as DNA-based vaccines against Her2 using either the full length expression of her2 (pE2A) or extracellular domain or intracellular domains (pE2TM, pSec2, p185 or MVA-BN-Her2) are being used to produce antibodies to Her2. Like many humanized antibodies, Herceptin can antibodies or human anti-human antibodies (HAHA). However, this is highly dependent upon the sensitivity of the assay. ADI has developed new ELISA kits that measures "Free Herceptin" in patients treated with Herceptin. ADI also has developed ELISA kits to detect antibodies to Herceptin (Human Anti-Herceptin Antibodies) in patients receiving long-term treatments. These kits will allow to research better ways to monitor Herceptin treatment. Additional ELISA kits are available to monitor the increase other autoimmune diseases (ANA, anti-dsDNA IgGs, tuberculosis). ADI also have variety of antibodies to human, mouse, and rat Herceptin and Her2 peptides for vaccine studies.

NeuVax, developed by Galena Biopharma, Inc., is a peptide-based vaccine aimed at preventing or delaying the recurrence of breast cancer in cancer survivors who achieve remission after standard of care treatment (e.g., surgery, radiation, chemotherapy). It consists of the E75 synthetic peptide initially isolated from HER2/neu proto-oncogene combined with the immune adjuvant, granulocyte macrophage colony stimulating factor (rhGM-CSF from yeast). NeuVax works by harnessing the patient’s own immune system to seek out and attack any residual cancer cells that express HER2/neu, a protein associated with tumors in breast, ovarian, pancreatic, colon, bladder and prostate cancers. E75 peptide (369-377 aa): The E75 contains an epitope, derived from the protein’s extracellular domain. E75 binds the HLA-A2 allele. Three clinical studies used E75 as an anti-Her2 vaccine in combination with incomplete Freund’s adjuvant (IFA) or GM-CSF and showed that vaccination induced a specific anti-peptide immune response with no associated toxicity.

Similarly, Her 2 peptide-derived vaccine (GP2, AE37 peptide or multiple peptides) are also being tested as vaccine.

**Human Anti-E75 Peptide IgG (Her2 369-377 aa vaccine) ELISA Kit #200-640-HRH**

This kit measures anti-E75 peptide IgG or IgM (Her2, 369-377 aa) in human or animal samples (buffers, serum or plasma). The antibody standards are calibrated to an internal reference standard and expressed in arbitrary units. The kit will be useful in measuring the antibodies to E75 vaccine given in vitro in vitro research use only.

**ELISA Kit Features**

- Her 2 vaccine candidate peptide E75 (Her2 369-377 aa) pre-coated, stabilized, ready-to-use 96-well strip plate, suitable for multiple runs over ~6 months.
- Anti-E75 peptide (Her2 369-377 aa) IgG standards (10-270 U/ml).
- Sample size 100 ul (serum or plasma diluted ~1:100 or more).
- 105 minutes, 3 incubation steps at room temp
- Sensitivity ~5 U/ml; Good Recovery and Assay Precision.
- Contains all necessary reagents. Shelf life ~6 months.
- Sample values are calculated from the standard curve.

**Specificity**

The kits are designed to detect only the IgG (#200-640-HRH) or IgM (#200-650-HRM) antibodies to Her2 E75 peptide. No other antibodies such as IgA or IgE will be detected. The peptide is coated directly on the plates and stabilized. There are no carrier proteins involved. So the antibodies (IgG or IgM) will only be towards the E75 peptide.
ADI is also offering custom testing of animal or human samples for Herceptin or antibodies to herceptin, and her2 measurements.

### Catalog# | Product Description
--- | ---
200-510-HLG | Herceptin/Trasuzumab ELISA Kit for human, 96 tests
200-520-HAG | Human Anti-Herceptin/Trasuzumab Antibody (HAHA) ELISA Kit 96 tests
200-530-HER | Her2/neu/Erbb2/CD340 protein ELISA kit, 96 tests
200-600-HRH | Human Anti-Her2 Protein (ECD) IgG ELISA kit for Her2 vaccine
200-610-HRM | Human Anti-Her2 Protein (ECD) IgM ELISA kit for Her2 vaccine
200-620-HRH | Mouse Anti-Her2 Protein (ECD) ELISA kit for Her2 vaccine
200-630-HRM | Mouse Anti-Her2 Protein (ECD) IgM ELISA kit for Her2 vaccine
200-640-HRH | Human Anti-Her2 vaccine (E75-peptide) IgG ELISA kit
200-650-HRM | Human Anti-Her2 vaccine (E75-peptide) IgM ELISA kit
200-660-HRH | Mouse Anti-Her2 vaccine (E75-peptide) IgE ELISA kit
200-670-HRM | Mouse Anti-Her2 vaccine (AE37-peptide) IgM ELISA kit
200-700-HRH | Human Anti-Her2 vaccine (AE37-peptide) IgG ELISA kit
200-710-HRM | Human Anti-Her2 vaccine (AE37-peptide) IgM ELISA kit
200-720-HRH | Mouse Anti-Her2 vaccine (AE37-peptide) IgG ELISA kit
200-730-HRM | Mouse Anti-Her2 vaccine (AE37-peptide) IgM ELISA kit
200-510-HLG | Herceptin/Trasuzumab ELISA Kit for human, 96 tests
200-530-HER | Her2/neu/Erbb2/CD340 protein ELISA kit, 96 tests
200-600-HRH | Human Anti-Her2 Protein (ECD) IgG ELISA kit for Her2 vaccine

### Catalog# | Product Description | ProductType
--- | --- | ---
HER21-C | Recombinant human Her-2/neu(erbB-2)-Fc protein control for WB | Western control
HER21-M | Mouse Monoclonal anti-human Her-2/neu(erbB-2) protein IgG, aff pure | Antibodies
HER21-R-10 | Recombinant (HEK) human Her2/Erbb2/Neu (1-652)-hlgG-Fc fusion protein | Protein
HER22-R-5 | Recombinant (s9) human Her2/Erbb2/Neu (676-1255)-GST fusion protein | Protein
HER2-369-A | Anti-Her2 peptide IgG (cyclic 367-37; E75 vaccine candidate) Aff pure | Antibodies
HER2-369-P | HER2 peptide, (369 –377), E75 vaccine candidate | peptide
HER23-R-10 | Recombinant (HEK) human Her2/Erbb2/Neu (1-652)-his tag fusion protein | Pure Protein
HER24-R-10 | Recombinant (HEK) mouse Her2/Erbb2/Neu (1-653)-his tag fusion protein | Pure Protein
HER2-563-P | HER2 peptide, cyclic, (563-598, cys-cys disulphide bond); vaccine candidate | peptide
HER2-585-P | HER2 peptide, cyclic, (585-598, cys-cys disulphide bond); vaccine candidate | peptide
HER2-597-A | Anti-Her2 peptide IgG (cyclic 597-626 vaccine candidate) Aff pure | Antibodies
HER2-597-P | HER2 peptide, cyclic, (597-626, cys-cys disulphide bond) vaccine candidate | peptide
HER25-R-10 | Recombinant (HEK) mouse Her2/Erbb2/Neu (1-653)-hlgG1-Fc fusion protein | Pure Protein
HER25-R-10 | HER2/Erb2 recombinant protein (1-652, extracellular domain), Human (E. coli) | Protein
HER25-R-100 | Recombinant (E. Coli) Her2-Neu(erbB-2) protein, purified | Pure Protein
HER25-R-20 | Recombinant (E. Coli) Her2/neu(erbB-2) protein, purified | Pure Protein
HER2-613-P | HER2 peptide, cyclic, (613-626, cys-cys disulphide bond); vaccine candidate | peptide
HER2-654-P | HER2 peptide, (654 – 662), GP2 vaccine candidate | peptide
HER26-R-10 | Recombinant (HEK) rat Her2/Erbb2/Neu (4-656)-his tag fusion protein | Pure Protein
HER26-R-10 | HER2/Erb2 recombinant protein (676–1255, intracellular domain), Human (E. coli), GST | Protein
HER2-776-P | HER2 peptide, (776 – 790 fused with LRMK, C-Term ), GP2 vaccine candidate | peptide
HER27-R-10 | Recombinant (HEK) rat Her2/Erbb2/Neu (4-656)-his tag fusion protein | Pure Protein
HER28-R-10 | Recombinant (HEK) rat Her2/Erbb2/Neu (4-656)-hlgG1-Fc fusion protein | Pure Protein
HER29-R-10 | Recombinant (HEK) monkey/rhesus Her2/Erbb2/Neu (1-652)-his tag fusion protein | Pure Protein
HER2-MP1 | HER2 multi peptide, (369-386, 688-703,971-984); vaccine candidate | peptide
HER2-MP2 | HER2 multi peptide, (776-790,927-941,1116-1180); vaccine candidate | peptide
HER2-MP3 | HER2 multi peptide, (42-56,98-114,328-345); vaccine candidate | peptide
HER30-R-10 | Recombinant (HEK) monkey/rhesus Her2/Erbb2/Neu (1-652)-hlgG1-Fc fusion protein | Pure Protein
HER31-M | Rabbit mono anti-human Her2/Erbb2/Neu (1-652) protein IgG | Antibodies
HER32-A | Anti-human Her2/Erbb2/Neu (1-652) protein IgG | Antibodies
HER33-M | Mouse mono-anti-mouse Her2/Erbb2/Neu (1-652) protein IgG | Antibodies
HER34-A | Anti-monkey/rhesus Her2/Erbb2/Neu (1-652) protein IgG | Antibodies

ADI is also offering custom testing of animal or human samples for herceptin or antibodies to herceptin, and her2 measurements.

Rev. 130318A

---

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; Email: service@4adi.com
Phone: (800) 786-5777; (210) 561-9515; Fax: (210) 561-9544; Web Site: www.4adi.com