

Product Specification Sheet

**HER 2 peptide**

**Cat #HER2-613-P**

HER2 peptide, cyclic, (613-626, cys-cys disulphide bond); vaccine candidate

**Size: 5 mg**

HER2 (Neu /ErbB-2/CD340/ p185) is a member of the epidermal growth factor receptor (EGFR/ErbB) family of receptor tyrosine kinases. It is an onco protein that is over expressed in 20-30% of breast cancers. It has an extra cellular domain (1-652 a.a), a transmembrane domain (653-675 a.a) and an intra cellular domain (676 – 1255 a.a). In patients with HER2-overexpressing tumors, different studies have shown cellular and/or humoral immune responses against HER2 in early stages of the disease Immunological tolerance against HER2 antigen represents a barrier to effective vaccination.

Peptide vaccines contain antigenic epitopes derived from Her2 domains for the induction of peptide-specific immune regulators (antibodies, helper T-cells and cytotoxic T lymphocytes). Numerous clinical trials have been conducted using various peptide preparations, with or without adjuvants.

The three-dimensional structure of human HER-2 in complex with trastuzumab reveals that the Ag-binding region of HER-2 spans residues 613-626 that comprises an extensive disulfide-bonding pattern. Peptides are derived from this region designed to mimic the ECD of her 2 that contact trastuzumab. They contain native disulphide bond and at least one region of the 3 binding sequences that make contact with trastuzumab.

**HER2-613-P** is a peptide containing sequences 613-626. The last a. a cys is mutated to Leu so as to prevent interference with natural disulphide formation.

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<b>Sequence</b>	MPIWKFPDEEGACQPL
<b>Avg. mass</b>	994.8
<b>Purity</b>	>93%
<b>Form and storage</b>	Powder. Store at -20°C up to 1 year.
<b>Shipping</b>	Shipped at 4° C
<b>Solubility</b>	Not tested

**General references:**

GE Peoples Journal of clinical oncology, 2005.171.66.121.246.  
Garrett JT J Immunol. 2007 Jun 1; 178(11):7120-31.

**Related Items**

HER2-597-P, HER2-369-P, HER2-776-P, HER2-585-P, HER2-563-P, HER2-828-P, HER225-R-10, HER26-R-10,

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