



Anti Trastuzumab monoclonal antibody (CABT-BL3651)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Immunogen	Herceptin
Isotype	Fab monovalent
Source/Host	Human
Species Reactivity	N/A
Conjugate	Unconjugated
Applications	Suitable for Blocking. Each laboratory should determine an optimum working titer for use in its particular application. Other applications have not been tested but use in such assays should not necessarily be excluded.
Format	Liquid
Size	1 mg
Buffer	Phosphate buffered saline
Preservative	None
Storage	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted. Should this product contain a precipitate we recommend micr°Centrifugation before use.

BACKGROUND

Introduction Trastuzumab (INN; trade names Herclon, Herceptin) is a monoclonal antibody that interferes

with the HER2/neu receptor. Its main use is to treat certain breast cancers.

The HER receptors are proteins that are embedded in the cell membrane and communicate molecular signals from outside the cell (molecules called EGFs) to inside the cell, and turn genes on and off. The HER proteins stimulate cell proliferation. In some cancers, notably certain types of breast cancer, HER2 is over-expressed, and causes cancer cells to reproduce uncontrollably.

A 2014 Cochrane Review examined the safety and efficacy of trastuzumab-containing combination therapies (with chemotherapy, hormone blockers, or lapatinib) for the treatment of metastatic breast cancer. The overall hazard ratios for overall survival and progression free survival were 0.82 and 0.61 respectively. It was difficult to accurately ascertain the true impact of trastuzumab on survival, as in three of the seven trials, over half of the patients in the control arm were allowed to cross over and receive trastuzumab after their cancer began to progress. Thus this analysis likely underestimates the true survival benefit associated with trastuzumab treatment in this population. In these trials, trastuzumab also increased the risk of heart problems, including heart failure (RR 3.49) and left ventricular ejection fraction decline (RR 2.65).

In early stage (curable) HER2-positive breast cancer, trastuzumab-containing regimens improved overall survival (HR 0.66) and disease-free survival (HR 0.60) relative to comparator arms involving treatment with placebo or chemotherapy. Increased risk of heart failure (RR 5.11) and decline in left ventricular ejection fraction (RR 1.83) were seen in these trials as well. Two trials involving shorter term treatment with trastuzumab did not differ in efficacy from longer trials, but produced less cardiac toxicity.

It is on the World Health Organization's List of Essential Medicines, a list of the most important medications needed in a basic health system.
