NOVEL HUMAN-DERIVED HER2 ANTIBODY FOR CANCER THERAPEUTICS AND DIAGNOSTICS

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ADDRESSED NEED

The HER2 protein is overexpressed in 20-30% of breast cancers and is a well-established treatment target. While HER2-targeted antibodies have proven effective cancer therapies, those currently on the market are derived from non-human sources and routinely elicit adverse immune responses. This technology directly addresses this challenge by using a novel, human-derived HER2 antibody for more tolerable applications.

KEY BENEFITS

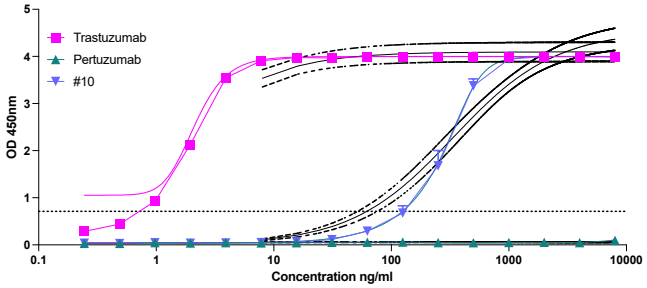
- **Reduced adverse immune response**
- Novel antibody **overcomes acquired resistance** and **broadens therapeutic landscape**
- **Dual applicability** for therapeutics and diagnostics

TECHNOLOGY FEATURES

- Antibody is **derived from human clonal B cells**
- Light and heavy chain variable **sequences are novel**
- **Functionally like trastuzumab**, the gold standard for HER2 antibodies

SUMMARY

Vanderbilt researchers have discovered a human-derived antibody that recognizes HER2, a protein overexpressed in various cancers. These antibodies offer potential **novel cancer therapeutics** and **diagnostic tools** with improved **immunological compatibility** compared to humanized antibody alternatives.



Dose-response ELISA curve showing that the binding of the novel human-derived antibody (purple) is similar to Trastuzumab (pink).

OTHER DETAILS

Intellectual Property Status:
Provisional patent filed.

Stage of Development:
Antibody sequenced and characterized, *in vitro* efficacy assays performed in breast cancer cells.

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