C009P.NA: Trastuzumab Biosimilar, N297A Mutant

Catalog No.: C009P.NA | **Product Name:** Trastuzumab Biosimilar, N297A Mutant

Trastuzumab Biosimilar, N297A Mutant. The research grade trastuzumab biosimilar protein is for research use only (RUO). Recombinant human IgG1 isotype controls are available. Trastuzumab biosimilar (clone huMAb 4D5-8) is the humanized anti-human HER2 mouse monoclonal antibody (clone muMAb 4D5).

PRODUCT SPECIFICATIONS

Catalog No.	C009P.NA
Product Name	Trastuzumab Biosimilar, N297A Mutant
Supplier Name	Syd Labs, Inc.
Brand Name	Syd Labs
Synonyms	Anti-ErbB-2 Humanized Monoclonal Antibody, Anti-c-neu Humanized Monoclonal Antibody
Summary	Recombinant Humanized IgG1 Monoclonal Antibody.
Isotype	Human IgG1 N297A Mutant.
Source/Host	The monoclonal antibody trastuzumab biosimilar was produced in the trastuzumab biosimilar CHO stable cell line, which is available for licensing to manufacture the trastuzumab biosimilar protein.
Specificity/Sensitivity	The research grade trastuzumab biosimilar specifically binds to the human HER2 / ErbB-2 / c-neu.
Applications	ELISA, neutralization, functional assays such as bioanalytical PK and ADA assays, and those assays for studying biological pathways affected by trastuzumab.
Form Of Antibody	0.2 μM filtered solution, pH 6.0, no stabilizers or preservatives.
Endotoxin	< 1 EU per 1 mg of the protein by the LAL method.
Purity	>95% by SDS-PAGE under reducing conditions and HPLC.
Shipping	The Trastuzumab Biosimilar, N297A Mutant is shipped with ice pack. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70°C as supplied. 1 month from date of receipt, 2 to 8°C as supplied.
Note	The research grade trastuzumab biosimilar protein is for research use only (RUO). Recombinant human IgG1 isotype controls are available. Trastuzumab biosimilar (clone huMAb 4D5-8) is the humanized anti-human HER2 mouse monoclonal antibody (clone muMAb 4D5).

REFERENCES & BACKGROUND

What is trastuzumab biosimilar N297A mutant research grade? Trastuzumab, a humanized monoclonal antibody, interferes with the HER2/neu receptor and is mainly used to treat certain breast cancers, especially HER2-positive metastatic breast cancer. Combined with chemotherapy, trastuzumab increases both survival and response rate. There are four closely related receptor tyrosine kinases in the ErbB family of receptors: EGFR (ErbB-1; HER1 in humans), HER2/c-neu (ErbB-2), Her 3 (ErbB-3) and Her 4 (ErbB-4). Bound by members of the epidermal growth factor family (EGF-family) of extracellular protein ligands, the HER receptors embedded in the cell membrane promote cell growth and division by turning genes on and off. The HER2 pathway stimulates cell proliferation if it normally functions; when HER2 is overexpressed, cell growth accelerates beyond its normal limits, which happens in some cancers, notably certain types of breast cancer. The N297A mutation removes the N-linked glycosylation site in the Fc region, resulting in aglycosylated IgG1 with greatly diminished binding to Fcγ receptors and C1q, thereby abolishing ADCC and CDC effector functions. Trastuzumab biosimilar N297A mutant uses the same variable region sequences as the therapeutic antibody trastuzumab (Herceptin) with the engineered N297A Fc mutation.