C002P.NA: Cetuximab Biosimilar, N297A Mutant

Catalog No.: C002P.NA | **Product Name:** Cetuximab Biosimilar, N297A Mutant

Cetuximab Biosimilar, N297A Mutant. The research grade cetuximab biosimilar protein is for research use only (RUO). Recombinant human IgG1 isotype controls are available. Cetuximab biosimilar CHO stable cell line is available for licensing to manufacture the cetuximab biosimilar protein.

PRODUCT SPECIFICATIONS

Catalog No.	C002P.NA
Product Name	Cetuximab Biosimilar, N297A Mutant
Supplier Name	Syd Labs, Inc.
Brand Name	Syd Labs
Synonyms	Anti-EGFR Chimeric Monoclonal Antibody
Summary	Recombinant Chimeric IgG1 Monoclonal Antibody.
Isotype	Human IgG1 N297A Mutant.
Source/Host	The monoclonal antibody cetuximab biosimilar was produced in the cetuximab biosimilar CHO stable cell line.
Specificity/Sensitivity	The monoclonal antibody cetuximab biosimilar specifically binds to the human EGFR.
Applications	ELISA, neutralization, functional assays such as bioanalytical PK and ADA assays, and those assays for studying biological pathways affected by cetuximab.
Form Of Antibody	0.2 μM filtered solution, pH 7.2, 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 Cetuximab 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 cetuximab biosimilar protein is for research use only (RUO). Recombinant human IgG1 isotype controls are available. Cetuximab biosimilar CHO stable cell line is available for licensing to manufacture the cetuximab biosimilar protein.

REFERENCES & BACKGROUND

What is cetuximab biosimilar N297A mutant research grade? Cetuximab, a chimeric (mouse/human) anti-EGFR monoclonal antibody, is an EGFR inhibitor used for the treatment of metastatic colorectal cancer and head and neck cancer. Cetuximab binds to EGFR and turns off the uncontrolled growth in cancers with EGFR mutations. Cetuximab can be used for treatment of KRAS wild-type colon cancer but has little or no effect in colorectal tumors harboring a KRAS mutation. Before treatment using Erbitux, it is better to do a diagnosis using the real-time PCR companion diagnostic test for KRAS. 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, EGFR located on cell surface sends a signal down the MAPK pathway that includes another protein, KRAS. Mutations affecting EGFR and/or KRAS expression or activity could result in cancer. The mutated KRAS continuously sends a growth signal to the downstream pathway, leading to uncontrollable cell division, even if EGFR has been blocked. 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. Cetuximab biosimilar N297A mutant uses the same variable region sequences as the therapeutic antibody cetuximab (Erbitux) with the engineered N297A Fc mutation.