C049P: Gemtuzumab Biosimilar, Anti-human CD33 Monoclonal Antibody

Catalog No.: C049P | **Product Name:** Gemtuzumab Biosimilar, CD33 Monoclonal Antibody

Gemtuzumab Biosimilar, CD33 Monoclonal Antibody. The research grade Gemtuzumab biosimilar protein is for research use only (RUO). Recombinant human IgG4 isotype controls are available. Condition of sample preparation and optimal sample dilution should be determined experimentally by the investigator.

PRODUCT SPECIFICATIONS

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Product Name	Gemtuzumab Biosimilar, CD33 Monoclonal Antibody
Supplier Name	Syd Labs, Inc.
Brand Name	Syd Labs
Synonyms	Siglec-3, sialic acid binding Ig-like lectin 3, SIGLEC3, gp67, p67
Summary	Recombinant Humanized IgG4 Monoclonal Antibody.
Isotype	Humanized IgG4.
Source/Host	The anti-human CD33 monoclonal antibody gemtuzumab biosimilar was produced in the gemtuzumab biosimilar CHO stable cell line.
Specificity/Sensitivity	The research grade gemtuzumab biosimilar specifically binds to the human CD33 protein.
Applications	ELISA, neutralization, functional assays such as bioanalytical PK and ADA assays, and those assays for studying biological pathways affected by gemtuzumab.
Form Of Antibody	0.2 μM filtered solution, pH 7.4, 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 research grade gemtuzumab biosimilar 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 Gemtuzumab biosimilar protein is for research use only (RUO). Recombinant human IgG4 isotype controls are available. Condition of sample preparation and optimal sample dilution should be determined experimentally by the investigator.

REFERENCES & BACKGROUND

What is gemtuzumab biosimilar research grade? Gemtuzumab is a recombinant humanized IgG4 kappa antibody which is conjugated with calicheamicin derivative, a cytotoxic antitumor antibiotic isolated from fermentation of Micromonospora echinospora ssp. calichensis. Gemtuzumab ozogamicin has approximately 50% of the antibody loaded with 4–6 moles calicheamicin per mole of antibody. The antibody is specifically directed against the CD33 antigen present on leukemic myeloblasts in most patients with acute myeloid leukemia (AML). By binding to the CD33 antigen on tumors, the cytotoxic agent blocks the growth of cancerous cells and causes cell death. Gemtuzumab is directed against the CD33 antigen expressed by hematopoietic cells. Binding of the anti-CD33 antibody portion of Gemtuzumab with the CD33 antigen results in the formation of a complex that is internalized. Upon internalization, the calicheamicin derivative is released inside the lysosomes of the myeloid cell. The released calicheamicin derivative binds to DNA in the minor groove resulting in site-specific DNA double strand breaks via formation of a p-benzene diradical. Eventually, cell death is induced. Gemtuzumab biosimilar uses the same protein sequences as the antibody component of the therapeutic antibody-drug conjugate gemtuzumab ozogamicin (Mylotarg).