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Anti-Human TROP-2 (Sacituzumab Biosimilar)

Catalog Number:	505501, 505502, 505503, 505504, 505505
Size:	1 mg, 5 mg, 20 mg, 5 mg, 20 mg
Regulatory Status:	RUO

PRODUCT DETAILS

Clone:	Sacituzumab
Application:	Flow cytometry, animal model study
Format:	Liquid
Product Description:	Sacituzumab Biosimilar, Trop-2 Monoclonal Antibody
Isotype:	Human IgG1
Clonality:	Recombinant
Immunogen:	Human Trop-2
Species specificity:	Human
Purity:	>95% by reducing SDS-PAGE
Grade:	In vivo
Storage Conditions:	4ºC
Maximal Shelf Life:	12 months

BACKGROUND INFORMATION

Sacituzumab, as a therapeutic, is an antibody–drug conjugate (ADC) composed of a humanized monoclonal antibody targeted against trophoblast cell-surface antigen 2 (Trop-2) conjugated to a potent cytotoxic payload. Structurally, the antibody component belongs to the immunoglobulin G1 kappa (IgG1κ) subclass and has a molecular weight of approximately 150 kilodaltons (kDa). It consists of two identical heavy chains and two identical light chains linked by disulfide bridges, forming the characteristic Y-shaped configuration typical of immunoglobulins. The antibody is produced through recombinant DNA technology in mammalian expression systems, ensuring proper folding, glycosylation, and immunoglobulin stability.

The Trop-2-binding regions of Sacituzumab are located in the variable domains of its heavy (VH) and light (VL) chains, which contain complementarity-determining regions (CDRs) that confer high-affinity binding to a specific extracellular epitope on the Trop-2 glycoprotein. Trop-2 is a transmembrane calcium signal transducer involved in cellular proliferation and adhesion processes. The antibody’s recognition of Trop-2 leads to receptor-specific binding and internalization via endocytosis.

The Fc (fragment crystallizable) portion contributes to molecular stability and longevity through neonatal Fc receptor (FcRn) recycling.