

## Anti-Human B7-H3 (Ifinatamab Biosimilar)

<b>Catalog Number:</b>	503201, 503202, 503203
<b>Size:</b>	1 mg, 5 mg, 20 mg
<b>Regulatory Status:</b>	RUO

### PRODUCT DETAILS

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<b>Clone:</b>	Ifinatamab
<b>Application:</b>	Flow cytometry, animal model study
<b>Format:</b>	Liquid
<b>Product Description:</b>	Ifinatamab Biosimilar, Human B7-H3 Monoclonal Antibody
<b>Isotype:</b>	Human IgG1
<b>Clonality:</b>	Recombinant
<b>Immunogen:</b>	Human B7-H3
<b>Species specificity:</b>	Human
<b>Purity:</b>	>95% by reducing SDS-PAGE
<b>Grade:</b>	In vivo
<b>Min Sample Size:</b>	1 mg
<b>Storage Conditions:</b>	4°C
<b>Maximal Shelf Life:</b>	12 months
<b>Synonyms:</b>	CD276

### BACKGROUND INFORMATION

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Ifinatamab, also known as Ifinatamab deruxtecan or DS-7300a, is a humanized monoclonal antibody belonging to the immunoglobulin G1 kappa (IgG1 $\kappa$ ) subclass. It is engineered to recognize and bind to the human B7-H3 (CD276) cell surface glycoprotein, a member of the B7 family involved in immune regulation and intercellular signaling. As a therapeutic, the Ifinatamab molecule is part of an antibody-drug conjugate (ADC) system, where the IgG1 antibody is covalently linked to a cytotoxic topoisomerase I inhibitor, deruxtecan, via a cleavable peptide-based linker. The complete conjugate typically displays a molecular weight near 150 kilodaltons (kDa) and maintains the classical Y-shaped antibody configuration.

The antibody portion of Ifinatamab consists of two heavy chains and two light chains joined by disulfide bonds. The variable (VH and VL) domains form the antigen-binding regions, containing complementarity-determining regions (CDRs) that confer high specificity toward epitopes on the extracellular domains of B7-H3. The binding mechanism involves non-covalent interactions, including hydrogen bonds and hydrophobic contacts, ensuring nanomolar-level affinity. Upon binding to B7-H3 on the cell surface, the ADC-antigen complex undergoes receptor-mediated endocytosis, transporting the conjugate into the lysosomal compartment of the target cell.

The Fc (fragment crystallizable) region of the IgG1 backbone supports molecular stability and prolonged half-life by engaging neonatal Fc receptors (FcRn), while maintaining minimal immune effector activation.

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