InnoCyto

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Anti-Human PTK7 (Cofetuzumab Biosimilar)

Catalog Number:	501601, 501602, 501603
Size:	1 mg, 5 mg, 20 mg
Regulatory Status:	RUO

PRODUCT DETAILS

Clone:	Cofetuzumab
Application:	Flow cytometry, animal model study
Format:	Liquid
Product Description:	Anti-Human PTK7 (Cofetuzumab Biosimilar)
Isotype:	Human IgG1
Clonality:	Recombinant
Immunogen:	Human PTK7
Species specificity:	Human
Purity:	>95% by reducing SDS-PAGE
Grade:	In vivo
Min Sample Size:	1 mg
Storage Conditions:	4ºC
Maximal Shelf Life:	12 months
RRID:	AB_3739292

BACKGROUND INFORMATION

Cofetuzumab is a humanized immunoglobulin G1 kappa (IgG1κ) monoclonal antibody engineered to target the cell surface protein tyrosine kinase 7 (PTK7). This protein belongs to the catalytically inactive receptor tyrosine kinase family and is involved in cellular processes such as signaling, adhesion, and migration. Structurally, the antibody component of Cofetuzumab has the classical Y-shaped configuration composed of two identical heavy chains and two identical light chains connected by disulfide bonds, with a molecular weight typical of full-length IgG1 antibodies (around 150 kilodaltons). It is produced in mammalian expression systems, such as Chinese Hamster Ovary (CHO) cells, to ensure correct folding and glycosylation patterns.

The antibody portion contains variable domains (VH and VL) with complementarity-determining regions (CDRs) that bind specifically to epitopes on PTK7. These binding sites direct the antibody to PTK7-expressing cell membranes, enabling molecular selectivity through non-covalent interactions including hydrogen bonding and hydrophobic contacts. Therapeutically, Cofetuzumab is designed as an antibody-drug conjugate (ADC), meaning it is covalently linked—via a specialized chemical linker—to a potent cytotoxic payload, in this case pelidotin, a microtubule-disrupting agent derived from auristatin analogs. The linker connecting pelidotin to the antibody is cleavable within the cellular environment, allowing targeted drug release upon internalization.