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CTLA-4 Fc Fusion Protein (Abatacept Biosimilar)

Catalog Number:	500001, 500002, 500003
Size:	1 mg, 5 mg, 20 mg
Target Name:	CTLA4, CD152, CELIAC3, GSE, IDDM12
Regulatory Status:	RUO

PRODUCT DETAILS

Clone:	Abatacept
Application:	Flow cytometry, animal model study
Format:	Liquid
Product Description:	Abatacept Biosimilar
Isotype:	N/A
Clonality:	Recombinant
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
Synonyms:	CD152

BACKGROUND INFORMATION

Abatacept is a recombinant fusion protein engineered to specifically interfere with T-cell activation pathways. Structurally, it consists of the extracellular domain of cytotoxic T-lymphocyte–associated antigen 4 (CTLA-4, also known as CD152) fused to the modified Fc region of human immunoglobulin G1 (IgG1). This fusion creates a single, stable glycoprotein molecule with both binding and effector-modulating properties. The molecular weight of Abatacept is approximately 92 kilodaltons (kDa).

The CTLA-4 domain of Abatacept retains high affinity for CD80 (B7-1) and CD86 (B7-2) on antigen-presenting cells (APCs). This binding is competitive with the natural T-cell surface receptor CD28, which normally interacts with CD80/CD86 to deliver a critical costimulatory signal required for full T-lymphocyte activation. By occupying these ligands, the CTLA-4 component effectively blocks T-cell costimulation, thereby inhibiting the cascade of downstream immune responses. The immunoglobulin Fc fragment in Abatacept contributes to molecular stability, prolongs serum half-life through neonatal Fc receptor (FcRn) recycling, and facilitates purification through Protein A affinity, but it is engineered to minimize unwanted immune effector functions such as complement activation or antibody-dependent cytotoxicity.