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ProductInformation

CD30/Fc Chimera
Human, Recombinant
Expressed in NSO cells

Product Number **C 5862**

Product Description

Recombinant Human CD30/Fc Chimera is produced from a DNA sequence encoding the extracellular domain of the human CD30 protein (amino acids 1-379)[1] fused to the C-terminal Fc region of human IgG1 by a polypeptide linker. The chimeric protein is expressed in mouse myeloma NSO cells. Based on N-terminal sequencing, recombinant human CD30/Fc has Phe 19 at the amino-terminus. The reduced monomer has a calculated molecular mass of approximately 66 kDa. Due to glycosylation, the recombinant protein migrates as an approximately 100 -110 kDa protein in SDS-PAGE under reducing conditions.

CD30 is a type I transmembrane glycoprotein of the tumor necrosis factor (TNF) receptor superfamily. It was originally identified as a cell surface antigen of Hodgkin's and Reed-Sternberg cells using monoclonal antibody Ki-1. The ligand for CD30 is CD30L (CD153). The binding of CD30L to CD30 mediates pleiotropic effects including cell proliferation, activation, differentiation, and apoptotic cell death. CD30 has a critical role in the pathophysiology of Hodgkin's disease and other $CD30^+$ lymphomas. CD30 acts as a co-stimulatory molecule in thymic negative selection.[2]

In addition to its expression on Hodgkin's and Reed-Sternberg cells,[1] CD30 is also found in some non-Hodgkin's lymphomas (including Burkitt's lymphomas), virus-infected T and B cells, and on normal T and B cells after activation.[3] In T cells, CD30 expression is present on a subset of T cells that produce Th2-type cytokines and on $CD4^+/CD8^+$ thymocytes that coexpress CD45RO and the IL-4 receptor.

Reagent

Recombinant Human CD30/Fc Chimera is supplied as approximately 100 µg of protein lyophilized from a 0.2 µm filtered solution in phosphate buffered saline.

Preparation Instructions

Reconstitute the contents of the vial using sterile phosphate-buffered saline (PBS) containing at least 0.1% human serum albumin or bovine serum albumin. Prepare a stock solution of no less than 50 µg/ml.

Storage/Stability

Store at –20 ° C. Upon reconstitution, the product may be stored at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Do not store in a frost-free freezer.

Product Profile

Recombinant Human CD30/Fc Chimera is measured by its ability to neutralize the bioactivity of recombinant human CD30 ligand on HDLM-2 cells, a Hodgkin's lymphoma cell line.

The ED_{50} for this effect is typically 0.04-0.12 µg/ml in the presence of 1 µg/ml recombinant human.

The ED_{50} is defined as the effective concentration of cytokine that elicits a 50% increase in cell growth in a cell based bioassay.

Purity: > 95% as determined by SDS-PAGE, visualized by silver stain.

Endotoxin level is < 1.0 endotoxin units/µg cytokine as determined by the LAL (Limulus amebocyte lysate) method.

References

1. Durkop, H., et al., Molecular cloning and expression of a new member of the nerve growth factor receptor family is characteristic for Hodgkin's disease. Cell, **68**, 421-427 (1992).
2. Chiarle, R., et al., CD30 overexpression enhances negative selection in the thymus and mediates programmed cell death via a Bcl-2-sensitive pathway. J. Immunol., **163**, 194-205 (1999).
3. Gruss, H.J., et al., CD30 ligand expression in nonmalignant and Hodgkin's disease-involved lymphoid tissues. Am. J. Pathol., **149**, 469-481 (1996).

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