Recombinant Rat CD30/TNFRSF8 Fc Chimera

Catalog Number: 11034-CD

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived rat CD30/TNFRSF8 protein

Rat CD30 (Phe19-Leu255) Accession # EDL81069.1	IEGRMDP	Mouse IgG_{2a} (Glu98-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Phe19
Structure / Form	Disulfide linked homodimer
Predicted Molecular Mass	52 kDa

SPECIFICATIONS

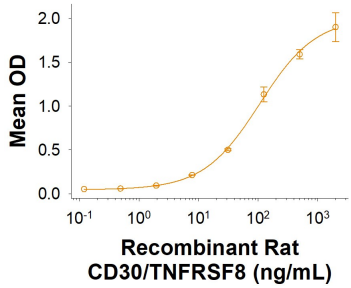
SDS-PAGE	80-95 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Mouse CD30 Ligand/TNFSF8 (Catalog # 732-CL/CF) is immobilized at 0.250 µg/mL (100 µL/well), Recombinant Rat CD30/TNFRSF8 Mouse Fc Chimera binds with and ED_{50} of 20.0-120 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

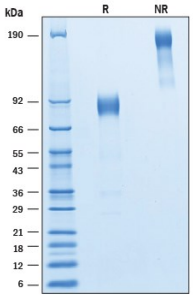
DATA

Binding Activity



Recombinant Rat CD30/TNFRSF8 Mouse Fc Chimera Protein Binding Activity. When Recombinant Mouse CD30 Ligand/TNFSF8 (Catalog # 732-CL) is immobilized at 0.250 µg/mL (100 µL/well), Recombinant Rat CD30/TNFRSF8 Mouse Fc Chimera Protein (Catalog # 11034-CD) binds with and ED_{50} of 20.0-120 ng/mL.

SDS-PAGE



Recombinant Rat CD30/TNFRSF8 Mouse Fc Chimera Protein SDS-PAGE. 2 µg/lane of Recombinant Rat CD30/TNFRSF8 Mouse Fc Chimera Protein (Catalog # 11034-CD) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 80-95 kDa and 160-190 kDa, respectively.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Recombinant Rat CD30/TNFRSF8 Fc Chimera

Catalog Number: 11034-CD

BACKGROUND

Lymphocyte activation antigen CD-30 (CD30), also known as Tumor necrosis factor receptor superfamily member 8 (TNFRSF8), is a type I transmembrane glycoprotein belonging to the TNFR superfamily (1, 2). Mature rat CD30 consists of an extracellular domain (ECD) containing four disulfide bonds and two cysteine-rich repeats, a transmembrane domain, and a cytoplasmic domain. Within the ECD, rat CD30 shares 45% and 79% amino acid (aa) sequence identity with human and mouse CD30, respectively. In human, isoforms of CD30 with truncated cytoplasmic domains can be generated as well as a soluble form, which is produced by proteolytic cleavage of CD30 at the cell surface and is found in serum (3, 4). CD30 is normally expressed on antigen-stimulated Th cells and B cells (5 - 7). CD30 binds to CD30 Ligand/TNFSF8 which is expressed on activated Th cells, monocytes, granulocytes and medullary thymic epithelial cells (2, 6). Signaling via CD30-CD30L has been shown to induce the activation and proliferation of T cells and the CD30–CD30L pathway has been implicated as a major player in secondary humoral immune responses (2). In the absence of antigenic stimulation, CD30 can still induce T cell expression of IL-13 (8). CD30 contributes to thymic negative selection by inducing the apoptotic cell death of CD4+CD8+ T cells (8, 9). In B cells, CD30 ligation promotes cellular proliferation and antibody production in addition to the expression of CXCR4, CCL3, and CCL5 (6, 10). Soluble CD30 retains the ability to bind CD30 Ligand and functions as an inhibitor of normal CD30 signaling (11). CD30 is up-regulated in Hodgkin's disease (on Reed-Sternberg cells), other lymphomas, chronic inflammation, and autoimmunity (12).

References:

1. Hehlgans, T. & Pfeffer, K. (2005) Immunology **115(1)**:1–20.
2. Kennedy, M.K. *et al.* (2006) Immunology **118**:143.
3. van der Weyden, C.A. *et al.* (2017). Blood Cancer J. **7**:e603
4. Buchan, S.L. and Al-Shamkhani, A. (2012) PLoS ONE **7**:e45244.
5. Hamann, D. *et al.* (1996) J. Immunol. **156:**1387.
6. Shanebeck, S.D. *et al.* (1995) Eur. J. Immunol. **25**:2147.
7. Gruss, H.-J. *et al.* (1994) Blood **83**:2045.
8. Harlin, H. *et al.* (2002) J. Immunol. **169**:2451.
9. Amakawa, R. *et al.* (1996) Cell **84**:551.
10. Vinante, F. *et al.* (2002) Blood **99**:52.
11. Hargreaves, P.G. and A. Al-Shamkhani (2002) Eur. J. Immunol. **32**:163.
12. Oflzoglu E. *et al.* (2009) Adv. Exp. Med. Biol. **647**:174.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449