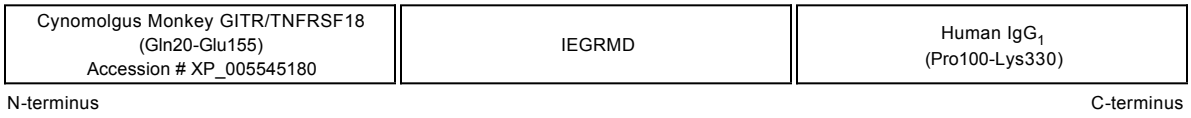
Recombinant Cynomolgus Monkey GITR/TNFRSF18 Fc Chimera

Catalog Number: 9428-GR

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived



N-terminal Sequence Analysis	No results obtained. Gln20 inferred from enzymatic pyroglutamate treatment revealing Arg21
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	41 kDa

SPECIFICATIONS

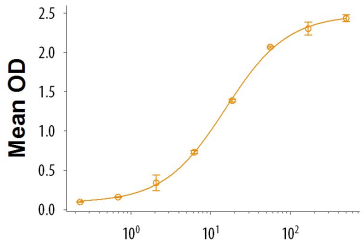
SDS-PAGE	49-60 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Cynomolgus Monkey GITR/TNFRSF18 Fc Chimera is immobilized at 0.5 µg/mL, 100 µL/well, the concentration of biotinylated recombinant human GITR Ligand/TNFSF18 that produces 50% of the optimal binding response is 8-40 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

Bioactivity



When Recombinant Cynomolgus Monkey GITR/TNFRSF18 Fc Chimera (Catalog # 9428-GR) is immobilized at 0.5 µg/mL, biotinylated recombinant human GITR Ligand/TNFSF18 binds with an ED_{50} of 8-40 ng/mL.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Recombinant Cynomolgus Monkey GITR/TNFRSF18 Fc Chimera

Catalog Number: 9428-GR

BACKGROUND

GITR (glucocorticoid-induced tumor necrosis factor receptor), also known as AITR and TNFRSF18, is a 40 kDa transmembrane glycoprotein that functions in immune regulation (1, 2). Mature human GITR consists of a 137 amino acid (aa) extracellular domain (ECD) with three tandem TNF R cysteine-rich repeats, a 21 aa transmembrane segment, and a 58 aa cytoplasmic domain (3, 4). Within the ECD region, cyno GITR shares 89.8% and 53.2% aa sequence identity with human and mouse GITR, respectively. Alternative splicing generates an isoform with a short deletion in the cytoplasmic domain and a potentially secreted isoform that is substituted within the third TNF R repeat and lacks the transmembrane and cytoplasmic regions. GITR is expressed on $CD4^+CD25^+$ regulatory T cells (Treg) as well as on subsets of thymocytes, lymph node cells, and splenocytes (4-6), and it is up-regulated on antigen-activated conventional $CD4^+$ and $CD8^+$ T cells (3, 4, 6, 7). GITR binding by GITR Ligand/TNFSF18 co-stimulates the proliferation and activation of $CD4^+$ or $CD8^+$ conventional T cells (3, 7-9). It also induces the proliferation of Treg (8, 10) but inhibits the ability of Treg to suppress immune responses (5, 8, 11-13). This can result in the development of autoimmunity, increased tumor cell killing by effector T cells (5, 11), and increased inflammation in arthritis, allergic asthma, and inflammatory bowel disease (10, 14). GITR is also expressed on sympathetic neurons where it enhances NGF-induced neurite outgrowth and branching (15).

References:

1. Clouthier, D.L. and T.H. Watts (2014) Cytokine Growth Factor Rev. 2**5**:91.
2. Ronchetti, S. *et al.* (2015) J. Immunol. Res. **2015**:171520.
3. Gurney, A.L. *et al.* (1999) Curr. Biol. **9**:215.
4. Kwon, B. *et al.* (1999) J. Biol. Chem. **274**:6056.
5. Shimizu, J. *et al.* (2002) Nat. Immunol. **3**:135.
6. Nocentini, G. *et al.* (1997) Proc. Natl. Acad. Sci. USA **94**:6216.
7. Muriglan, S.J. *et al.* (2004) J. Exp. Med. **200**:149.
8. Ronchetti, S. *et al.* (2004) Eur. J. Immunol. **34**:613.
9. Tone, M. *et al.* (2003) Proc. Natl. Acad. Sci. USA **100**:15059.
10. Ephrem, A. *et al.* (2013) Eur. J. Immunol. **43**:2421.
11. Ko, K. *et al.* (2005) J. Exp. Med. **202**:885.
12. Ji, H. *et al.* (2004) J. Immunol. **172**:5823.
13. Stephens, G.L. *et al.* (2004) J. Immunol. **173**:5008.
14. Patel, M. *et al.* (2005) Eur. J. Immunol. **35**:3581.
15. O'Keeffe, G.W. *et al.* (2008) Nat. Neurosci. **11**:135.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956