Recombinant Human KIR3DS1/CD158e2 Fc Chimera

Catalog Number: 4136-KR

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived

N-terminal Sequence Analysis	His22
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	61.9 kDa (monomer)

SPECIFICATIONS

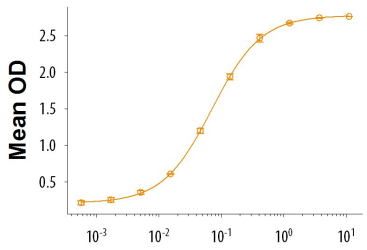
SDS-PAGE	75-90 kDa, reducing conditions
Activity	Measured by its ability to bind HLA on MDA-MB-231 human breast cancer cells. The ED_{50} for this effect is 0.03-0.18 µg/mL.
Endotoxin Level	<0.01 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile 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



Recombinant Human KIR3DS1/CD158e2 Fc Chimera (Catalog # 4136-KR) binds to MDA-MB-231 human breast cancer cells. The ED_{50} for this effect is 0.03-0.18 µg/mL.

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 Human KIR3DS1/CD158e2 Fc Chimera

Catalog Number: 4136-KR

BACKGROUND

KIR3DS1 (3DS1, CD158e2) is a type I transmembrane protein that belongs to the killer cell Ig-like receptor (KIR) family. KIRs are expressed on $CD56^{dim}$ NK cells and T cell subsets where they differentiate normal from abnormal cells, and regulate effector functions in the innate immune system (1 - 3). KIRs are named for the number of Ig-like domains (2D or 3D) in the extracellular domain (ECD), and whether they have long or short (L, S) cytoplasmic tails. Like other activating KIRs, KIR3DS1 has a short cytoplasmic tail and a positively charged amino acid (aa) within the transmembrane domain that interacts with the ITAM-bearing signaling adaptor, DAP12 (2, 4). Crosslinking of KIR3DS1 activates cytolysis and induces IFN-γ production, confirming it to be an activating receptor (4). Approximately 38% of the population expresses KIR3DS1 on the surface of NK cells (1, 4, 5). Variants lacking the N-terminal Ig-like domain and/or with substitutions in the cytoplasmic tail have been described (1, 6). The 50 kDa, 387 aa KIR3DS1 shows 97% aa identity with KIR3DL1 within the ECD, and the two segregate as alleles (3, 7). Some activating KIRs bind weakly to the ligands recognized by their corresponding inhibitory KIR. KIR3DS1 does not bind appreciably to cells transfected with ligands for HLA-Bw4 KIR3DL1 (4, 5). However, HIV-infected people who express the combined phenotype of KIR3DS1 with Bw4 alleles that contain an isoleucine at aa 80, show delayed progression to AIDS and fewer AIDS-related opportunistic infections (7, 8). KIR receptors have no structural orthologs in nonprimates, although mouse Ly-49 proteins perform similar functions (2).

References:

1. Dohring, C. *et al.* (1996) Immunogenetics **44**:227.
2. Lanier, L. L. (2005) Annu. Rev. Immunol. **23**:225.
3. Uhrberg, M. *et al.* (1997) Immunity **7**:753.
4. Carr, W. H. *et al.* (2007) J. Immunol. **178**:647.
5. O'Connor, G. M. *et al.* (2007) J. Immunol. **178**:235.
6. Valiante, N. M. *et al.* (1997) Immunity **7**:739.
7. Martin, M. P. *et al.* (2002) Nat. Genet. **31**:429.
8. Qi, Y. *et al.* (2006) PloS Pathog. **2**:e79.

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