Recombinant Human KIR3DL3/CD158z His-tag

Catalog Number: 10454-KR

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human KIR3DL3/CD158z protein Gln26-Leu322, with a C-terminal 6-His tag Accession # NP_703144.3
N-terminal Sequence Analysis	Gln26, deduced from Asp27 upon deblocking
Predicted Molecular Mass	33 kDa

SPECIFICATIONS

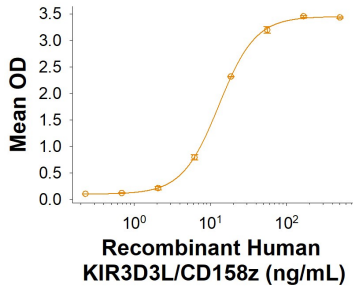
SDS-PAGE	42-47 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Biotinylated Recombinant Human B7-H7/HHLA2 Fc Chimera is present at 0.5 µg/mL, the concentration of Recombinant Human KIR3D3L/CD158z His-tag that produces 50% of the optimal binding response is found to be approximately 7.5-45 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 200 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.

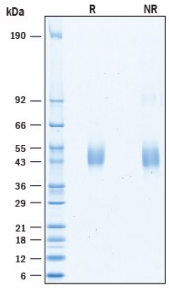
DATA

Binding Activity



When Biotinylated Recombinant Human B7-H7/HHLA2 Fc Chimera is present at 0.5 µg/mL, the concentration of Recombinant Human KIR3D3L/CD158z His-tag that produces 50% of the optimal binding response is found to be approximately 7.5-45 ng/mL.

SDS-PAGE



2 µg/lane of Recombinant Human KIR3DL3/CD158z (Catalog # 10454-KR) was resolved by SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 42-47 kDa.

BACKGROUND

KIR3DL3 (also known as CD158z, KIR3DL7, KIR44, or KIRC1) is a type I transmembrane glycoprotein that belongs to the killer cell Ig-like receptor (KIR) family. KIRs are expressed on CD56dim NK cells and T cell subsets where they regulate effector functions in the innate immune system (1 - 4). 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. Human KIR3DL3 cDNA encodes a 410 amino acid (aa) polypeptide precursor with a 25 aa signal peptide, a 297 aa extracellular domain (ECD) with 3 Ig-like domains (3D), a 21 aa transmembrane domain, and a 67 aa cytoplasmic domain (long). Within ECD human KIR3DL3 shares 47% and 44% aa sequence identity with mouse and rat KIR3DL3, respectively. KIR3DL3 is ubiquitously present in every individual across diverse populations, however little is known about specific functions (5). The limited knowledge of KIR3DL3 expression does suggest involvement in reproduction, likely during placentation (4). KIR3DL3 likely encodes an NK cell inhibitory receptor (6). Recent studies have shown that KIR3DL3 binding and function require both receptor aggregation and inhibitory signal attenuation (7).

References:

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3. Uhrberg, M. *et al.* (1997) Immunity **7**:753.
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7. Leaton, L. A. *et al.* (2019) Front. Immunol. **10**:24.

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