Recombinant Human ULBP-3 His-tag

Catalog Number: 11255-UL

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human ULBP-3 protein Gly27-His201, with a C-terminal 6-His tag Accession # Q9BZM4.1
N-terminal Sequence Analysis	Gly27
Predicted Molecular Mass	21 kDa

SPECIFICATIONS

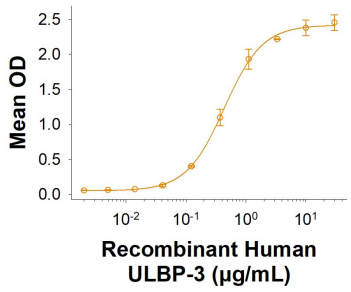
SDS-PAGE	20-27 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human NKG2D/CD314 Fc Chimera (Catalog # 1299-NK) is immobilized at 2 µg/mL (100 µL/well), Recombinant Human ULBP-3 His-tag (Catalog # 11255-UL) binds with an ED_{50} of 0.100-1.20 µg/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 with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 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. • 2 weeks, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -70 °C under sterile conditions after reconstitution.

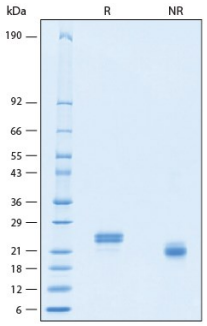
DATA

Binding Activity



Recombinant Human ULBP-3 His-tag Protein Binding Activity. When Recombinant Human NKG2D/CD314 Fc Chimera (Catalog # 1299-NK) is immobilized at 2 µg/mL (100 µL/well), Recombinant Human ULBP-3 His-tag Protein (Catalog # 11255-UL) binds with an ED_{50} of 0.100-1.20 µg/mL.

SDS-PAGE



Recombinant Human ULBP-3 His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Human ULBP-3 His-tag Protein (Catalog # 11255-UL) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 20-27 kDa.

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

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BACKGROUND

ULBP-3 is a member of a family of cell-surface proteins that function as ligands for human NKG2D. ULBP-3 has also been described under the names RaeT1N (retinoic acid early transcript), NKG2DL3, and ALCAN-gamma. The name ULBP-3 derives from the original identification of three proteins, ULBP-1, -2, and -3, as ligands for the human cytomegalovirus glycoprotein UL16; they were designated UL16 binding proteins (ULBP). The gene for ULBP-3 resides in a cluster of ten related genes, six of which encode potentially functional glycoproteins. Amino acid sequence identity within this family ranges from 30-60%. These proteins are distantly related to MHC class I proteins, but they possess only the α1 and α2 Ig-like domains, and they have no capacity to bind peptide or interact with β2-microglobulin. Some family members, including ULBP-3, are anchored to the membrane via a GPI-linkage, whereas others have transmembrane domains. ULBP-3 and several other family members are known to bind to human NKG2D, an activating receptor expressed on NK cells, NKT cells, γδ T cells, and $CD8^+$ αβ T cells. Engagement of NKG2D results in the activation of cytolytic activity and/or cytokine production by these effector cells. The ULBPs are expressed on some tumor cells and have been implicated in tumor surveillance (1-7).

References:

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3. Sutherland, C. *et al.* (2002) J. Immunol. **168**:671.
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