

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ULBP-3 in direct ELISAs and Western blots. In these formats, approximately 5% cross-reactivity with recombinant human (rh) ULBP-2 is observed and less than 1% cross-reactivity with rhULBP-1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ULBP-3 Gly27-Pro216 Accession # NP_078794
Endotoxin Level	<0.1 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human ULBP-3 Fc Chimera (Catalog # 1517-UL)
Blockade of Receptor-ligand Interaction	In a functional ELISA, 1-3 µg/mL of this antibody will block 50% of the binding of 20 ng/mL of biotinylated Recombinant Human ULBP-3 Fc Chimera to immobilized Recombinant Human NKG2D Fc Chimera (Catalog # 1299-NK) coated at 2 µg/mL (100 µL/well). At 100 µg/mL, this antibody will block >90% of the binding.	

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month from date of receipt, 2 to 8 °C, reconstituted. ● 6 months from date of receipt, -20 to -70 °C, reconstituted.

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 $\alpha 1$ and $\alpha 2$ Ig-like domains, and they have no capacity to bind peptide or interact with $\beta 2$ -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, $\gamma \delta$ T cells, and CD8⁺ $\alpha \beta$ 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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