Human ULBP-2/5/6 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1298

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ULBP-2, ULBP-5, and RAET1L/ULBP-6 in Western blots. In direct ELISAs and Western blots, less than 2% cross-reactivity with recombinant human (rh) ULBP-1, rhULBP-3, and rhULBP-4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ULBP-2 Gly26-Ser217 Accession # Q9BZM5
Endotoxin Level	<0.10 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.

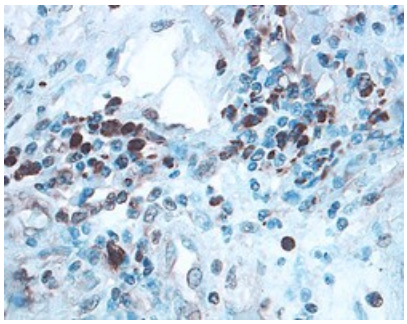
APPLICATIONS

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-2 Fc Chimera (Catalog # 1298-UL), Recombinant Human ULBP-5 (Catalog # 7149-UL), and Recombinant Human RAET1L/ULBP-6 (Catalog # 7485-UL)
Immunohistochemistry	5-15 µg/mL	See Below
Blockade of Receptor-ligand Interaction	In a functional ELISA, 0.2-0.6 µg/mL of this antibody will block 50% of the binding of 25 ng/mL of biotinylated Recombinant Human ULBP-2 Fc Chimera to immobilized Recombinant Human NKG2D Fc Chimera (Catalog # 1299-NK) coated at 2 µg/mL (100 µL/well). At 5 µg/mL, this antibody will block >90% of the binding. This antibody will block >90% of the binding of either Recombinant Human ULBP-5 Fc Chimera or Recombinant ULBP-6 Fc Chimera to immobilized Recombinant Human NKG2D Fc Chimera.	

DATA

Immunohistochemistry



ULBP-2/5/6 in Human Colon Cancer Tissue. ULBP-2/5/6 was detected in immersion fixed paraffin-embedded sections of human colon cancer tissue using 10 µg/mL Goat Anti-Human ULBP-2/5/6 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1298) overnight at 4 °C. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

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	**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. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

ULBPs activate multiple signaling pathways in primary NK cells, resulting in the production of cytokines and chemokines. Binding of ULBPs ligands to NKG2D induces calcium mobilization and activation of the JAK2, STAT5, ERK and PI3K kinase/Akt signal transduction pathway. The name ULBP 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 genes for ULBPs reside in a cluster of ten related genes, six of which encode potentially functional glycoproteins. ULBP-2 has also been described under the names RaeT1H (retinoic acid early transcript), NKG2DL2, and ALCAN-alpha. ULBP-5 also known as RaeT1G and ULBP-6 also known as RaeT1L. 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-2, are anchored to the membrane via a GPI-linkage, whereas others have transmembrane domains. 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. Over aa 26-217, ULBP-2 shares 92% and 95% aa sequence identity with the human ULBP-5 and ULBP-6, respectively.

References:

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