

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human ULBP-2, ULBP-5, and ULBP-6 in Western blots. In Western blots, less than 1% cross-reactivity with recombinant human (rh) ULBP-1 and rhULBP-3 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human ULBP-2 Gly26-Ser217 Accession # Q9BZM5
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	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)

## PREPARATION AND STORAGE

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

## 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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2. Kubin, M. *et al.* (2001) *Eur. J. Immunol.* **31**:1428.
3. Sutherland, C. *et al.* (2002) *J. Immunol.* **168**:671.
4. Steinle, A. *et al.* (2001) *Immunogenetics* **53**:279.
5. Sutherland, C. *et al.* (2001) *Immunol. Rev.* **181**:185.
6. Pende, D. *et al.* (2002) *Cancer Res.* **62**:6178.
7. Radosavljevic, M. *et al.* (2002) *Genomics* **79**:114.
8. NKG2D and its Ligands (2002) [www.RnDSystems.com](http://www.RnDSystems.com)