

DESCRIPTION

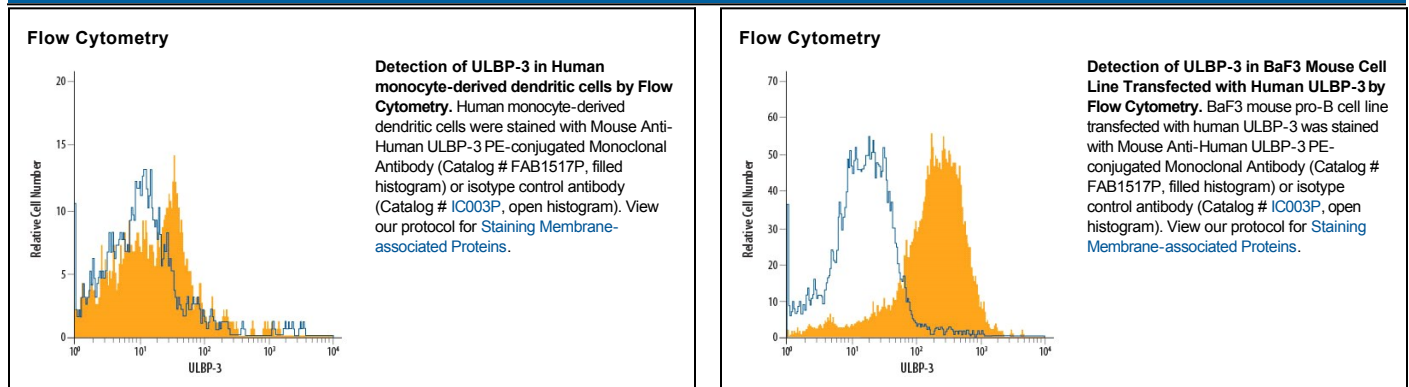
Species Reactivity	Human
Specificity	Detects human ULBP-3 in ELISAs. Does not cross-react with recombinant human (rh) ULBP-1 or rhULBP-2.
Source	Monoclonal Mouse IgG _{2A} Clone # 166510
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	BaF3 mouse pro-B cell line transfected with human ULBP-3
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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
Flow Cytometry	10 μ L/10 ⁶ cells	See Below

DATA



PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> ● 12 months from date of receipt, 2 to 8 °C as supplied.

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- γ . 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 α 1 and α 2 Ig-like domains, and they have no capacity to bind peptide or interact with β 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:

1. Cosman, D. *et al.* (2001) *Immunity* **14**:123.
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) <http://www.RnDSystems.com/>.