

DESCRIPTION

Species Reactivity	Human
Specificity	Stains human ULBP-1 cell transfectants. It does not stain cells transfected with ULBP-2 or ULBP-3.
Source	Monoclonal Mouse IgG _{2A} Clone # 170818
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	BaF3 mouse pro-B cell line transfected with human ULBP-1
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL 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	0.25-1 µg/10 ⁶ cells	MOLT-4 human acute lymphoblastic leukemia cell line

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-1 is a member of a family of cell-surface proteins that function as ligands for human NKG2D. ULBP-1 has also been described under the names RaeT11 (retinoic acid early transcript), ALCAN-beta, and NKG2DL1. The name ULBP-1 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-1 resides in a cluster of ten related genes, six of which encode potentially functional glycoproteins. Amino acid sequence identity within this family ranges from 30-95%. 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. They are anchored to the membrane via a GPI-linkage. ULBP-1 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. ULBP-1 is expressed on some tumor cells and has been implicated in tumor surveillance (1-8).

References:

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7. Radosavljevic, M. *et al.* (2002) *Genomics* **79**:114
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