

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LSECtin/CLEC4G in flow cytometry.
Source	Monoclonal Mouse IgG _{2A} Clone # 845404
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	NS0 mouse myeloma cell line transfected with LSECtin/CLEC4G Ser54-Cys293 Accession # Q6UXB4
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	Human mature dendritic cells

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

LSECtin (liver and lymph node sinusoidal endothelial cell C-type lectin), also known as C-type lectin superfamily 4, member G (CLEC4G), is a member of subgroup II of the C-type (Ca²⁺-dependent) lectin superfamily (1). The protein was named LSECtin because its initial expression was described to be restricted to liver and lymph node sinusoidal endothelial cells (1). Since then, however, LSECtin has also been detected in peripheral blood and thymic dendritic cells isolated *ex vivo*, and in monocyte-derived macrophages and dendritic cells at the RNA and protein level (2). Human LSECtin is an approximately 40 kDa, single-pass, type II transmembrane glycoprotein that is 293 amino acids (aa) in length. It contains a short N-terminal cytoplasmic tail (aa 1-31) and a 21 aa transmembrane region. Its extracellular region consists of two N-linked glycosylation sites (aa 73 and 159), a coil-coil neck domain (aa 96-136), a C-type lectin-like domain (CTLD) of the type found in human DC-SIGN and DC-SIGN receptor (aa 165-289), and a C-terminal Ca²⁺-dependent carbohydrate-recognition domain (C-type CRD) (1). Human LSECtin shares 64% aa sequence identity with mouse LSECtin. LSECtin binds to mannose, GlcNAc, and fucose in a Ca²⁺-dependent manner (1-3). In addition, LSECtin has the ability to bind to surface glycoproteins of enveloped viruses (3, 4). In particular, interaction of LSECtin with the surface glycoproteins of severe acute respiratory syndrome (SARS) coronavirus and Ebola virus has been described, and LSECtin-mediated infection of cells by Ebola virus has been demonstrated (3, 4).

References:

1. Liu, W. *et al.* (2004) *J. Biol. Chem.* **279**:18748.
2. Dominguez-Soto, A. *et al.* (2007) *Blood* **109**:5337.
3. Powlesland, A. *et al.* (2008) *J. Biol. Chem.* **283**:593.
4. Gramberg, T. *et al.* (2005) *Virology* **340**:224.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.