

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 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 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. ● 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.

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