Recombinant Human L-Selectin/CD62L Fc Chimera

Catalog Number: 11169-LS

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human L-Selectin/CD62L protein

Human L-Selectin (Trp52-Leu332) Accession # AAH20758.1	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Trp52
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	58 kDa

SPECIFICATIONS

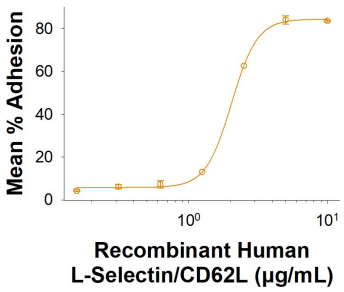
SDS-PAGE	85-100 kDa, under reducing conditions.
Activity	Measured by the ability of the immobilized protein to support the adhesion of LS180 human colorectal adenocarcinoma cells. The ED_{50} for this effect is 0.350-3.50 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Supplied as a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Shipping	The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after opening. • 3 months, -20 to -70 °C under sterile conditions after opening.

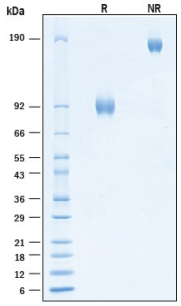
DATA

Bioactivity



Recombinant Human L-Selectin/CD62L Fc Chimera Protein Bioactivity. Recombinant Human L-Selectin/CD62L Fc Chimera Protein (Catalog # 11169-LS) supports the adhesion LS180 human colorectal adenocarcinoma cells. The ED_{50} for this effect is 0.350-3.50 µg/mL.

SDS-PAGE



Recombinant Human L-Selectin/CD62L Fc Chimera Protein SDS-PAGE. 2 µg/lane of Recombinant Human L-Selectin/CD62L Fc Chimera Protein (Catalog # 11169-LS) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 85-100 kDa and 170-200 kDa, respectively.

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BACKGROUND

L-Selectin, also known as Leukocyte adhesion molecule 1 (LAM-1) and CD62L, is a type-1 cell surface glycoprotein and cell adhesion molecule of the Selectin family (1). In humans, there are 3 Selectins, P, E, and L, and they are Ca2+ dependent lectins that help mediate the initial adhesive step during inflammation and immune surveillance (2). Mature L-Selectin consists of an extracellular domain (ECD) with a C-type lectin domain and an epidermal growth factor (EGF)-like domain, a transmembrane domain, and a short cytoplasmic domain. Within the ECD, human L-selectin shares 76% and 78% amino acid sequence identity with mouse and rat L-selectin, respectively. Several isoforms arising from alternative splicing have been reported, some with potential therapeutic implications (2,3). L-selectin is constitutively expressed on a wide variety of leukocytes and plays a role in the migration of lymphocytes into peripheral lymph nodes and sites of chronic inflammation, and of neutrophils into acute inflammatory sites (1-4). Acting in cooperation with P-Selectin and E-Selectin, L-Selectin mediates the initial interaction of circulating leukocytes with endothelial cells that produces a characteristic "rolling" of the leukocytes on the endothelium (5). This initial interaction, also involving ICAM-1 and VCAM-1, leads eventually to extravasation of the white blood cell through the blood vessel wall into the extracellular matrix tissue (6). L-selectin function is required for normal Treg cell migration and over expression might be result in reduced tumor growth (7). Several studies have reported that levels of L-Selectin may be elevated or lowered in subjects with a variety of conditions, such as in Alzheimer's disease or rheumatoid arthritis (3, 5).

References:

1. Ivetic, A. *et al.* (2019) Front. Immunol. **10**:1068.
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6. Granger, D.N. and Senchenkova, E. (2010) Inflammation and the Microcirculation. San Rafael (CA): Morgan & Claypool Life Sciences Chapter 7.
7. Watson, H.A. *et al.* (2019) Frontiers in immunology **10**:1321.

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