Recombinant Mouse LAMP-2/CD107b Fc Chimera

Catalog Number: 10552-LM

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived mouse LAMP-2/CD107b protein

Mouse LAMP-2/CD107b (Leu26-Asn379) Accession # P17047.2	IEGRMDP	Mouse IgG_{2a} (Glu98-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Leu26
Structure / Form	Dilsulfide-linked homodimer
Predicted Molecular Mass	66 kDa

SPECIFICATIONS

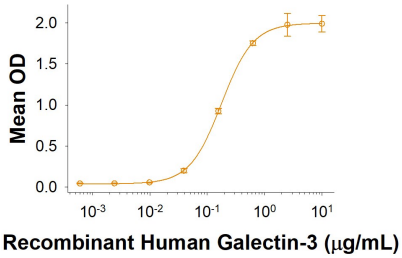
SDS-PAGE	109-122 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Mouse LAMP-2/CD107b Fc Chimera is immobilized at 1 µg/mL (100 µL/well), it binds to Recombinant Human Galectin-3 (Catalog # 1154-GA) with an ED_{50} of 0.1-10 µg/mL.
Endotoxin 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	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. 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, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Binding Activity



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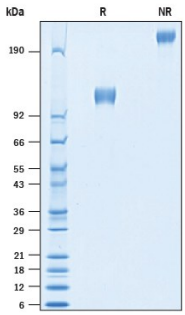
SDS-PAGE



2 µg/lane of Recombinant Mouse LAMP-2/CD107b Fc Chimera (Catalog # 10552-LM) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 109-122 kDa and 210-240 kDa, respectively.

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BACKGROUND

Lysosomal associated membrane protein 2 (LAMP-2), also known as CD107b and LGP110, is an approximately 110 kDa transmembrane glycoprotein that is a major component of lysosomal membranes (1). Mature mouse LAMP-2 consists of a 354 amino acid (aa) intralumenal domain, a 25 aa transmembrane segment, and a 11 aa cytoplasmic tail (2). Its lumenal domain is organized into two heavily N-glycosylated regions separated by a Ser/Pro-rich linker that carries a minor amount of O-linked glycosylation (2, 3). Alternate splicing generates two additional mouse LAMP-2 isoforms (LAMP-2B and LAMP-2C) with a substituted juxtamembrane lumenal region, transmembrane segment, and cytoplasmic tail (4). Within the lumenal domain, mouse LAMP-2 shares approximately 64% and 81% aa sequence identity with human and rat LAMP-2, repectively. LAMP-2 itself is subject to lysosomal degradation following cleavage of its lumenal domain (5). It mediates the lysosomal uptake of the chaperone HSC73 in complex with cargo proteins and is required for the lysosomal destruction of autophagic vacuoles (6, 7). In cytotoxic T cells and mast cells, LAMP-2 is expressed in the membranes of intracellular granules that contain effector molecules such as perforin, granzymes, eicosanoids, and histamine (8-10). Up-regulated LAMP-2 at the plasma membrane serves as an indicator of cell activation of CD8+ T cells, mast cells, monocytes, and platelets (9-12). LAMP-2 is a native ligand for lectins Galectin-1 and Galectin-3 (13-15).

References:

1. Eskelinen, E.-L. *et al.* (2003) Trends Cell Biol. **13**:137.
2. Fukuda, M. *et al.* (1988) J. Biol. Chem. **263**:18920.
3. Carlsson, S.R. et al. (1988) J. Biol. Chem. 263:18911.
4. Lichter-Konecki, U. *et al.* (1999) Differentiation **65**:43.
5. Cuervo, A.M. and J.F. Dice (2000) Traffic **1**:570.
6. Cuervo, A.M. and J.F. Dice (1996) Science **273**:501.
7. Tanaka, Y. *et al.* (1990) Nature **406**:902.
8. Peters, P.J. *et al.* (1991) J. Exp. Med. **173**:1099.
9. Betts, M.R. *et al.* (2003) J. Immunol. Meth. **281**:65.
10. Grutzkau, A. *et al.* (2004) Cytometry **61**:62.
11. Kannan, K. *et al.* (1996) Cell. Immunol. **171**:10.
12. Silverstein, R.L. and M. Febbraio (1992) Blood **80**:1470.
13. Skrincosky, D.M. *et al.* (1993) Cancer Res. **53**:2667.
14. Inohara, H. and Raz, A. (1994) Biochem. Biophys. Res. Commun. **201**:1366.
15. Ohannesian D.W. *et al.* (1994) Cancer Res. **54**:5992.

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