Recombinant Mouse PD-L1/B7-H1 Fc Chimera

Catalog Number: 1019-B7

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived

Mouse PD-L1 (Phe19-Thr238) Accession # Q9EP73	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Phe19
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	51.3 kDa (monomer)

SPECIFICATIONS

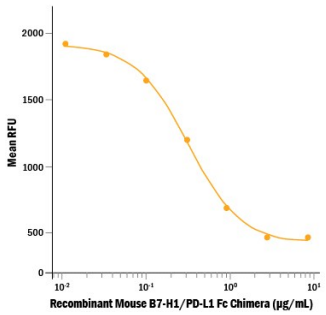
SDS-PAGE	75-85 kDa, reducing conditions
Activity	Measured by its ability to inhibit anti-CD3-induced proliferation of stimulated mouse T cells. The ED_{50} for this effect is 0.15-0.75 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with 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 100 µg/mL in sterile 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.

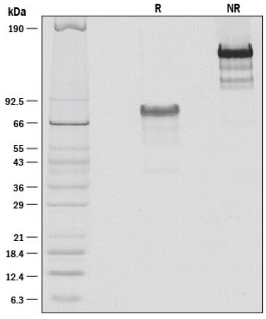
DATA

Bioactivity



Recombinant Mouse PD-L1/B7-H1 Fc Chimera (Catalog # 1019-B7) inhibits anti-CD3-induced cell proliferation of stimulated mouse T cells. The ED_{50} for this effect is 0.15-0.75 µg/mL.

SDS-PAGE



1 µg/lane of Recombinant Mouse PD-L1/B7-H1 Fc Chimera was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by silver staining, showing bands at 79 kDa and 150 kDa, respectively.

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Recombinant Mouse PD-L1/B7-H1 Fc Chimera

Catalog Number: 1019-B7

BACKGROUND

B7-H1, also known as PD-L1 and CD274, is an approximately 65 kDa transmembrane glycoprotein in the B7 family of immune regulatory molecules (1). Mature mouse B7-H1 consists of a 221 amino acid (aa) extracellular domain (ECD) with two immunoglobulin-like domains, a 21 aa transmembrane segment, and a 30 aa cytoplasmic domain (2). Within the ECD, mouse B7-H1 shares 73% and 86% aa sequence identity with human and rat B7-H1, respectively. B7-H1 is expressed on inflammatory-activated immune cells including macrophages, T cells, and B cells (2-5), keratinocytes (6, 7), enothelial and intestinal epithelial cells (6, 8), as well as a variety of carcinomas and melanoma (9, 10). B7-H1 binds to T cell B7-1/CD80 and PD-1 (5, 6, 10-13). It suppresses T cell activation and proliferation (3, 6, 12, 14) and induces the apoptosis of activated T cells (9). It plays a role in the development of immune tolerance by promoting T cell anergy (5, 12) and enhancing regulatory T cell development (14). B7-H1 favors the development of anti-inflammatory IL-10 and IL-22 producing dendritic cells (3, 8) and inhibits the development of Th17 cells (14). In cancer, B7-H1 provides resistance to T cell mediated lysis, enhances EMT, and enhances the tumorigenic function of Th22 cells (4, 7, 10, 13).

References:

1. Ceeraz, S. *et al.* (2013) Trends Immunol. **34**:556.
2. Tamura, H. *et al.* (2001) Blood **97**:1809.
3. Chen, L. *et al.* (2007) J. Immunol. **178**:6634.
4. Kuang, D.-M. *et al.* (2014) J. Clin. Invest. **124**:4657.
5. Tsushima, F. *et al.* (2007) Blood **110**:180.
6. Mazanet, M.M. and C.C.W. Hughes (2002) J. Immunol. **169**:3581.
7. Cao, Y. *et al.* (2010) Cancer Res. **71**:1235.
8. Scandiuzzi, L. *et al.* (2014) Cell Rep. **6**:625.
9. Dong, H. *et al.* (2002) Nat. Med. **8**:793.
10. Azuma, T. *et al.* (2008) Blood **111**:3635.
11. Butte, M.J. *et al.* (2008) Mol. Immunol. **45**:3567.
12. Park, J.-J. *et al.* (2010) Blood **116**:1291.
13. Ritprajak, P. *et al.* (2010) J. Immunol. **184**:4918.
14. Herold, M. *et al.* (2015) J. Immunol. **195**:3584.

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