

## Itolizumab

Cat. No.:	HY-P99252
CAS No.:	1116433-11-4
Target:	CD6
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

Description	Itolizumab (Anti-Human CD6 Recombinant Antibody) is a humanized recombinant anti-CD6 monoclonal antibody (MAb) targeting the extracellular SRCR distal domain 1 of CD6. Itolizumab reduces T-cell proliferation and inhibits the production of pro-inflammatory cytokines, such as INF- $\gamma$ , TNF $\alpha$ and IL-6. Itolizumab can be used in the research of psoriasis, rheumatoid arthritis (RA), COVID-19 <sup>[1][2][3]</sup> .	
IC <sub>50</sub> & Target	CD6 <sup>[1]</sup>	
In Vitro	<p>Itolizumab (100 <math>\mu</math>g/mL) inhibits T cell proliferation<sup>[4]</sup>.</p> <p>Itolizumab (0-100 <math>\mu</math>g/mL) inhibits Treg polarization and enhances acquisition of Th1 phenotype in PBMCs<sup>[4]</sup>.</p> <p>Itolizumab (40 <math>\mu</math>g/mL) reduces CD26<sup>hi</sup>CD161+ CD8+ T cells during culture of PBMCs overnight<sup>[5]</sup>.</p> <p>Itolizumab (40 <math>\mu</math>g/mL, 3-12 days) reduces the expression of IL-17 and IFN-<math>\gamma</math> in PBMCs stimulated in Th17 polarizing conditions<sup>[6]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>	
In Vivo	<p>Itolizumab (60 <math>\mu</math>g or 300<math>\mu</math>g, i.p., everyday) shows therapeutic efficiency in a humanized xenograft mouse model of Graft Vs Host Disease (GVHD)<sup>[7]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>	
	Animal Model:	Humanized xenograft mice, generated by intravenous transfer human PBMCs into 6-8 weeks old NOD/SCID IL2 $\gamma$ -null (NSG) <sup>[7]</sup>
	Dosage:	60 $\mu$ g or 300 $\mu$ g
	Administration:	Intraperitoneal injection (i.p.), prior to PBMC transplantation.
	Result:	Decreased mortality compared to the vehicle (100% vs. 10%).

### REFERENCES

- [1]. Saavedra D, et al. An anti-CD6 monoclonal antibody (itolizumab) reduces circulating IL-6 in severe COVID-19 elderly patients. Immun Ageing. 2020 Nov 14;17(1):34.
- [2]. Loganathan S, et al. Itolizumab, an anti-CD6 monoclonal antibody, as a potential treatment for COVID-19 complications. Expert Opin Biol Ther. 2020 Sep;20(9):1025-

- [3]. Srivastava A. Itolizumab in Psoriasis. Indian J Dermatol. 2017 Jul-Aug;62(4):418-421.
- [4]. Freitas RF, et al. Modulation of CD4 T cell function via CD6-targeting. EBioMedicine. 2019 Sep;47:427-435.
- [5]. Globig AM, et al. High-dimensional profiling reveals Tc17 cell enrichment in active Crohn's disease and identifies a potentially targetable signature. Nat Commun. 2022 Jun 27;13(1):3688.
- [6]. Bughani U, et al. T cell activation and differentiation is modulated by a CD6 domain 1 antibody Itolizumab. PLoS One. 2017 Jul 3;12(7):e0180088.
- [7]. Cherie Tracy Ng, et al. Itolizumab As a Potential Therapeutic for the Prevention and Treatment of Graft Vs Host Disease. Blood (2019) 134 (Supplement\_1): 5603.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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