

Iscalimab

Cat. No.:	HY-P99670
CAS No.:	2031153-61-2
Target:	TNF Receptor
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Iscalimab (CFZ-533) is a non-depleting IgG1 monoclonal antibody targeting CD40 (K _D : 0.3 nM). Iscalimab can be used for research of Graves' hyperthyroidism and autoimmune diseases ^{[1][2][3]} .									
IC₅₀ & Target	CD40 0.3 nM (IC ₅₀)									
In Vitro	<p>Iscalimab (0.01-1 µg/mL, overnight) blocks rCD154-induced TNF production by primary monocyte-derived dendritic cells (moDCs), with an IC₅₀ of 0.04 µg/mL^[3].</p> <p>Iscalimab (3 days) inhibits rCD154-induced proliferation of PBMCs from humans, rhesus and cynomolgus animals with IC₅₀s of 0.02, 0.03, and 0.01 µg/mL, respectively^[3].</p> <p>Iscalimab bind CD40 on B cells from humans, rhesus and cynomolgus animals with EC₅₀ values of approximately 0.2 µg/mL^[3].</p> <p>Iscalimab (2 µg/mL, 3 h) is internalized by B cells in a CD40-dependent manner^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[3]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>PBMCs from humans, rhesus and cynomolgus animals</td> </tr> <tr> <td>Concentration:</td> <td>0-1 µg/mL approximately</td> </tr> <tr> <td>Incubation Time:</td> <td>3 days</td> </tr> <tr> <td>Result:</td> <td>Inhibited rCD154-induced proliferation of PBMCs with IC₅₀s of 0.02, 0.03, and 0.01 µg/mL, respectively.</td> </tr> </table>		Cell Line:	PBMCs from humans, rhesus and cynomolgus animals	Concentration:	0-1 µg/mL approximately	Incubation Time:	3 days	Result:	Inhibited rCD154-induced proliferation of PBMCs with IC ₅₀ s of 0.02, 0.03, and 0.01 µg/mL, respectively.
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In Vivo	<p>Iscalimab (150 mg/kg/week, s.c, for 13 weeks) is well tolerated and does not cause any dose-limiting toxicity in rhesus monkeys^[3].</p> <p>Iscalimab (10 mg/kg, i.v.) completely inhibits T cell-dependent antibody response in Rhesus monkeys^[3].</p> <p>Iscalimab (30 mg/kg, i.v.) prolongs allograft survival in kidney transplant cynomolgus^[4].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Kidney transplant cynomolgus^[4]</td> </tr> </table>		Animal Model:	Kidney transplant cynomolgus ^[4]						
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Dosage:	30 mg/kg
Administration:	i.v.
Result:	Prolonged allograft survival. Well-tolerated with no evidence of thromboembolic events or CD40 pathway activation.

REFERENCES

- [1]. Kahaly GJ, et al. A Novel Anti-CD40 Monoclonal Antibody, Iscalimab, for Control of Graves Hyperthyroidism-A Proof-of-Concept Trial. *J Clin Endocrinol Metab.* 2020 Mar 1;105(3):dgz013.
- [2]. Flandre TD, et al. Immunosuppression Profile of CFZ533 (Iscalimab), a Non-Depleting Anti-CD40 Antibody, and the Presence of Opportunistic Infections in a Rhesus Monkey Toxicology Study. *Toxicol Pathol.* 2022 Jul;50(5):712-724.
- [3]. Ristov J, et al. Characterization of the in vitro and in vivo properties of CFZ533, a blocking and non-depleting anti-CD40 monoclonal antibody. *Am J Transplant.* 2018 Dec;18(12):2895-2904.
- [4]. Cordoba F, et al. A novel, blocking, Fc-silent anti-CD40 monoclonal antibody prolongs nonhuman primate renal allograft survival in the absence of B cell depletion. *Am J Transplant.* 2015 Nov;15(11):2825-36.

Caution: Product has not been fully validated for medical applications. For research use only.

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