

Mogamulizumab

Cat. No.:	HY-P99253
CAS No.:	1159266-37-1
Target:	CCR
Pathway:	GPCR/G Protein; Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Mogamulizumab (KW-0761) is a recombinant anti-CCR4 monoclonal antibody (MAb). Mogamulizumab can eliminate tumor cells by antibody-dependent cellular cytotoxicity (ADCC). Mogamulizumab can be used in the research of cancers, adult T-cell leukemia/lymphoma (ATLL), cutaneous T-cell lymphoma (CTCL) ^{[1][2][3]} .								
IC₅₀ & Target	CCR4								
In Vitro	<p>Mogamulizumab (10 µg/mL, 24 h) induces ADCC activity against CCR4-positive cell lines (SNT8, SNT16, SNK6, and KAI3) in the presence of PBMCs^[2].</p> <p>Mogamulizumab (10 µg/mL, 3 days) reduces the human T-lymphotropic virus type 1 (HTLV-1) proviral load and inhibits spontaneous proliferation in PBMCs from patients with HTLV-1-associated myelopathy/tropical spastic paraparesis (HAM/TSP)^[3].</p> <p>Mogamulizumab (1 µg/mL, 5 days) eliminates the CD4⁺CCR4⁺ T cells in cultured PBMCs from patients with HAM/TSP^[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								
In Vivo	<p>Mogamulizumab (1 mg/kg, i.p., twice per week for 4 weeks) together with PBMC transplantation inhibits the growth of EBV-positive NK-cell lymphomas in a murine xenograft model^[2].</p> <p>Mogamulizumab (0.1 mg/kg, i.v., every other day) together with canine PBMCs (every fourth day), inhibits tumor growth in canine bladder cancer-engrafted mouse model^[4].</p> <p>Mogamulizumab (0.01-1 mg/kg, i.v.) reduces circulating CD4⁺CCR4⁺ T cells, with no adverse effect in dogs^[4]. 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>Murine xenograft model, constructed by using the immunodeficient NOG mouse and the EBV-positive NK-cell lymphoma cell line (SNK6)^[2]</td> </tr> <tr> <td>Dosage:</td> <td>1 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection (i.p.), together with PBMC transplantation; twice per week for 4 weeks.</td> </tr> <tr> <td>Result:</td> <td>Suppressed Tumor growth with vacuolar degeneration.</td> </tr> </table>	Animal Model:	Murine xenograft model, constructed by using the immunodeficient NOG mouse and the EBV-positive NK-cell lymphoma cell line (SNK6) ^[2]	Dosage:	1 mg/kg	Administration:	Intraperitoneal injection (i.p.), together with PBMC transplantation; twice per week for 4 weeks.	Result:	Suppressed Tumor growth with vacuolar degeneration.
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REFERENCES

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- [1]. Duvic M, et al. Mogamulizumab for the treatment of cutaneous T-cell lymphoma: recent advances and clinical potential. *Ther Adv Hematol*. 2016 Jun;7(3):171-4.
- [2]. Kanazawa T, et al. Anti-CCR4 monoclonal antibody mogamulizumab for the treatment of EBV-associated T- and NK-cell lymphoproliferative diseases. *Clin Cancer Res*. 2014 Oct 1;20(19):5075-84.
- [3]. Yamauchi J, et al. Mogamulizumab, an anti-CCR4 antibody, targets human T-lymphotropic virus type 1-infected CD8+ and CD4+ T cells to treat associated myelopathy. *J Infect Dis*. 2015 Jan 15;211(2):238-48.
- [4]. Maeda S, et al. CCR4 Blockade Depletes Regulatory T Cells and Prolongs Survival in a Canine Model of Bladder Cancer. *Cancer Immunol Res*. 2019 Jul;7(7):1175-1187.
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