

Omalizumab

Cat. No.:	HY-P9950
CAS No.:	242138-07-4
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Omalizumab is a recombinant, humanized, monoclonal antibody against human immunoglobulin E (IgE) with a K_D of 0.393 nM. Omalizumab binds to the human FcγRIIb receptors with a K_D of 6.37 μM. Omalizumab has the potential for persistent allergic asthma research ^{[1][2]} .
In Vitro	Omalizumab (0.1, 0.5, 1.0, 2.0 μg/mL) has a direct effect on the B cells and can reduce the number of membrane IgE+ cells present in IL-4 plus anti-CD40 treated B cell cultures. Omalizumab alone has no effect on the viable cell number ^[3] . Omalizumab (1 μg/mL; 3, 7 days) reduces IL-6 secretion in human B cells. Omalizumab does not induce apoptosis in human B cells ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Omalizumab (10 mg/kg/day; ip; on day 8 to 42) increases IgE levels in human PBMC-engrafted severe combined immunodeficiency (huSCID) mice ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Peipei Liu, et al. An Omalizumab Biobetter Antibody With Improved Stability and Efficacy for the Treatment of Allergic Diseases. *Front Immunol.* 2020 Nov 27;11:596908.
- [2]. Seung Y Chu, et al. Reduction of total IgE by targeted coengagement of IgE B-cell receptor and FcγRIIb with Fc-engineered antibody. *J Allergy Clin Immunol.* 2012 Apr;129(4):1102-15.
- [3]. Marcia A Chan, et al. Omalizumab may decrease IgE synthesis by targeting membrane IgE+ human B cells. *Clin Transl Allergy.* 2013 Sep 2;3(1):29.

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

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