

Theralizumab

Cat. No.:	HY-P9975
CAS No.:	906068-56-2
Target:	CD28
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Theralizumab (TGN1412) is a humanized IgG4 superagonistic anti-CD28 monoclonal antibody that directly stimulates T cells. Theralizumab can cause cytokine release syndrome (CRS). Theralizumab can be used for the research of rheumatoid arthritis ^{[1][2]} .	
In Vitro	Theralizumab (5 µg/mL, 4 days) increases CD4+ T-cell division in PBMCs following high-density (HD) preculture, and induces release of inflammatory cytokines ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	Theralizumab (0.1-2 mg/kg, i.v.) induces lymphopenia and human cytokine release in humanized mice model ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Humanized mice model ^[3]
	Dosage:	0.1-2 mg/kg
	Administration:	i.v.
	Result:	Caused loss of hCD45+ cells of about 60% at 2 mg/kg from the peripheral blood.

REFERENCES

- [1]. Thomas Hüinig. The rise and fall of the CD28 superagonist TGN1412 and its return as TAB08: a personal account. FEBS J. 2016 Sep;283(18):3325-34.
- [2]. Dmitry Tyrsin, et al. From TGN1412 to TAB08: the return of CD28 superagonist therapy to clinical development for the treatment of rheumatoid arthritis. Clin Exp Rheumatol. Jul-Aug 2016;34(4 Suppl 98):45-8.
- [3]. Weißmüller S, et al. TGN1412 Induces Lymphopenia and Human Cytokine Release in a Humanized Mouse Model. PLoS One. 2016 Mar 9;11(3):e0149093.
- [4]. Hussain K, et al. Upregulation of FcγRIIb on monocytes is necessary to promote the superagonist activity of TGN1412. Blood. 2015 Jan 1;125(1):102-10.

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

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