

## Vobarilizumab

Cat. No.:	HY-P99385
CAS No.:	1628814-88-9
Target:	Interleukin Related
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	Vobarilizumab (ALX-0061) is an anti-IL-6R monoclonal antibody (mAb) ( $K_d$ : 0.19 pM). Vobarilizumab consists of an anti-IL-6R domain and an anti-human serum albumin domain. Vobarilizumab can be used in the research of inflammatory autoimmune diseases, such as rheumatoid arthritis <sup>[1][2][3]</sup> .	
<b>In Vitro</b>	Vobarilizumab shows a preferential binding affinity for sIL-6R compared with mIL-6R <sup>[2]</sup> . Vobarilizumab (0-10 nM) blocks the interaction of recombinant hIL-6 to recombinant hsIL-6R <sup>[3]</sup> . Vobarilizumab (0-100 nM) blocks proliferation of the TF-1 cells <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
<b>In Vivo</b>	Vobarilizumab (0.4-10 mg/kg, i.v.) inhibits hIL-6-induced inflammation in cynomolgus monkey <sup>[3]</sup> . Vobarilizumab (0.4-10 mg/kg, i.v.) shows a prolonged exposure through binding to serum albumin in cynomolgus monkeys <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	hIL-6-induced inflammation in cynomolgus monkey <sup>[3]</sup>
	Dosage:	0.4 mg/kg, 2 mg/kg, or 10 mg/kg
	Administration:	Intravenous injection (i.v.)
	Result:	Inhibited the acute phase response parameters: plasma levels of C-reactive protein (CRP), fibrinogen and platelets.
	Animal Model:	Cynomolgus monkeys <sup>[3]</sup>
	Dosage:	0.4 mg/kg, 2 mg/kg, or 10 mg/kg
	Administration:	Intravenous injection (i.v.)
	Result:	Pharmacokinetic parameters of Vobarilizumab

dose (mg/kg)	T <sub>1/2</sub> dominant (day)	AUC <sub>inf</sub> (μg/day/mL)	CL (mL/day/kg)	V <sub>ss</sub> (mL/kg)
0.4 (i.v.)	1.73	16.3	24.8	42.8
2 (i.v.)	5.0	193	10.4	53.7
10 (i.v.)	6.61	1136	9	82.7

## REFERENCES

- [1]. Kerschbaumer A, et al. Efficacy of pharmacological treatment in rheumatoid arthritis: a systematic literature research informing the 2019 update of the EULAR recommendations for management of rheumatoid arthritis. *Ann Rheum Dis.* 2020 Jun;79(6):744-759.
- [2]. M. Van Roy, et al. FRI0021 Alx-0061, an anti-IL-6r nanobody® for therapeutic use in rheumatoid arthritis, demonstrates in vitro a differential biological activity profile as compared to tocilizumab. *Ann Rheum Dis.* 2013. 72 (3).
- [3]. Van Roy M, et al. The preclinical pharmacology of the high affinity anti-IL-6R Nanobody® ALX-0061 supports its clinical development in rheumatoid arthritis. *Arthritis Res Ther.* 2015 May 20;17(1):135.

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

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