

## Stamulumab

Cat. No.:	HY-P99588
CAS No.:	705287-60-1
Target:	TGF- $\beta$ Receptor
Pathway:	TGF-beta/Smad
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	Stamulumab (MYO-029) is a recombinant human IgG1 $\lambda$ antibody that binds to myostatin and neutralizes its activity by preventing binding to its endogenous high-affinity receptor ActRIIB. Stamulumab leads to muscle fiber hypertrophy and not hyperplasia in SCID mice. Stamulumab has the potential for Becker muscular dystrophy (BMD), facioscapulohumeral dystrophy (FSHD), and limb-girdle muscular dystrophy (LGMD) research <sup>[1][2]</sup> .			
<b>In Vivo</b>	Stamulumab (MYO-029; ip; 1-10 mg/kg/week for 12 weeks) increases skeletal muscle mass in vivo in a concentration-dependent manner in SCID mice. Stamulumab leads to muscle fiber hypertrophy and not hyperplasia <sup>[1]</sup> . Stamulumab (i.v.; 1, 5, 20, 100 mg/kg/week for 4 weeks) has a central clearance (CL) of 0.25 mL/h/kg in C57/SCID mice <sup>[1]</sup> . Pharmacokinetic Parameters of Stamulumab (MYO-029) <sup>[1]</sup> .			
	C57/SCID mice IV (1-100 mg/kg/week for 4 weeks)	Sprague Dawley rats (2-50 mg/kg; single injection)	Cynomolgus monkeys (10-100 mg/kg/week for 5 or 39 weeks)	
	CL (mL/h/kg)	0.245	0.542	0.228
	Volume of central compartment (mL/kg)	103	58.9	41.8
	Distributive clearance (mL/h/kg)		1.79	0.815
MCE has not independently confirmed the accuracy of these methods. They are for reference only.				
Animal Model:	Female SCID mice <sup>[1]</sup>			
Dosage:	1, 2.5, 5, 10 mg/kg			
Administration:	IP; every week for 12 weeks			
Result:	Increased skeletal muscle mass in vivo in a concentration-dependent manner.			

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## REFERENCES

- [1]. P Singh, et al. Translational Pharmacokinetic/Pharmacodynamic Analysis of MYO-029 Antibody for Muscular Dystrophy. Clin Transl Sci. 2016 Dec;9(6):302-310.
- [2]. Kathryn R Wagner, et al. A phase I/II trial of MYO-029 in adult subjects with muscular dystrophy. Ann Neurol. 2008 May;63(5):561-71.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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