

## Bimagrumab

|           |   |
|-----------|---|
| Cat. No.: | HY-P99355   |
| CAS No.:  | 1356922-05-8  |
| 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>                  | Bimagrumab (Anti-ACVR2B Reference Antibody) is a human monoclonal antibody that blocks activin type II receptor (ActRII), with $K_D$ s of 1.7 pM and 434 pM for human ActRIIB and ActRIIA, respectively. Bimagrumab can be used for the research of pathological muscle loss and weakness <sup>[1][2]</sup> .   |                       |
| <b>IC<sub>50</sub> &amp; Target</b> | ACVR2B<br>1.7 pM (Kd)   | ACVR2A<br>434 pM (Kd) |
| <b>In Vitro</b>                     | <p>BYM338 (1 pM-1 <math>\mu</math>M; 24 h) inhibits Myostatin- and Activin A-induced Smad2/3-dependent luciferase responses in HEK293 cells with IC<sub>50</sub>s of 154 and 343 pM, respectively<sup>[2]</sup>.</p> <p>BYM338 (4 days) prevents the inhibition of differentiation and fusion induced upon exogenous addition of Myostatin or Activin A<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> |                       |
| <b>In Vivo</b>                      | <p>BYM338 (6-20 mg/kg; s.c. once weekly for 4 weeks) promotes an increase in body weight and skeletal muscle hypertrophy of all examined muscles, slow, fast, and mixed of young SCID mice<sup>[2]</sup>.</p> <p>BYM338 (5-20 mg/kg; s.c. once weekly for 14 d) prevents Glucocorticoid-induced muscle wasting in mice<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>                                  |                       |

### CUSTOMER VALIDATION

- Mol Metab. 2024 Jan 11:101880.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

### REFERENCES

[1]. Heymsfield SB, et al. Effect of Bimagrumab vs Placebo on Body Fat Mass Among Adults With Type 2 Diabetes and Obesity: A Phase 2 Randomized Clinical Trial. JAMA Netw Open. 2021 Jan 4;4(1):e2033457.

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[2]. Lach-Trifilieff E, et, al. An antibody blocking activin type II receptors induces strong skeletal muscle hypertrophy and protects from atrophy. Mol Cell Biol. 2014 Feb;34(4):606-18.

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

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