

## Lanadelumab

Cat. No.:	HY-P99110
CAS No.:	1426055-14-2
Target:	Ser/Thr Protease
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	Lanadelumab (SHP643) is a human IgG1 monoclonal antibody against plasma kallikrein (pKal) with an $K_i$ value of 0.12 nM. Lanadelumab inhibits both free and HMWK (high molecular weight kininogen)-bound pKal. Lanadelumab has the potential for the research of hereditary angioedema <sup>[1][2]</sup> .
<b>In Vitro</b>	Lanadelumab (0-1000 nM) inhibits pKal proteolytic activity of single-chain HMWK (its endogenous protein substrate), and addition of Lanadelumab to pKal samples in vitro prevents the proteolysis of HMWK and the consequent release of bradykinin with an $IC_{50}$ value of 1.3 nM <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Lanadelumab (20 mg/kg; i.v. or s.c.) shows a long half-life of about 12.5 days and blocks high molecular weight kininogen proteolysis in activated plasma in a dose- and time-dependent manner in cynomolgus monkeys <sup>[2]</sup> . Lanadelumab (1, 30 mg/kg; s.c.) inhibits carrageenan-induced paw edema in the Male Sprague-Dawley rats <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Riedl MA, et al. Lanadelumab demonstrates rapid and sustained prevention of hereditary angioedema attacks. *Allergy*. 2020 Nov;75(11):2879-2887.
- [2]. Kenniston JA, et al. Inhibition of plasma kallikrein by a highly specific active site blocking antibody. *J Biol Chem*. 2014 Aug 22;289(34):23596-608.

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

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