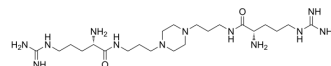


Ciraparantag

| | |
|--------------------|--|
| Cat. No.: | HY-18660 |
| CAS No.: | 1438492-26-2 |
| Molecular Formula: | C ₂₂ H ₄₈ N ₁₂ O ₂ |
| Molecular Weight: | 512.7 |
| Target: | Factor Xa |
| Pathway: | Metabolic Enzyme/Protease |
| Storage: | 4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen) |



SOLVENT & SOLUBILITY

In Vitro

H₂O : ≥ 31 mg/mL (60.46 mM)
* "≥" means soluble, but saturation unknown.

| Preparing Stock Solutions | Solvent | | Mass | | |
|---------------------------|---------------|--|-----------|-----------|------------|
| | Concentration | | 1 mg | 5 mg | 10 mg |
| | 1 mM | | 1.9505 mL | 9.7523 mL | 19.5046 mL |
| | 5 mM | | 0.3901 mL | 1.9505 mL | 3.9009 mL |
| | 10 mM | | 0.1950 mL | 0.9752 mL | 1.9505 mL |

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Ciraparantag is a thrombin and factor Xa inhibitor. Ciraparantag is a broad-spectrum reversal agent for anticoagulants, including low-molecular-weight heparin, unfractionated heparin, and certain direct oral anticoagulants. It is reported to antagonize the effects of all coagulants except VKAs and agratroban^{[1][2][3][4]}.

IC₅₀ & Target

thrombin, factor Xa^[1]

In Vitro

Ciraparantag is a small-molecule antidote for unfractionated heparin (UFH), low-molecular-weight heparin (LMWH), and certain direct oral anticoagulants (DOACs)^[2].

Ciraparantag is a small synthetic and cationic molecule that binds direct Xa inhibitors, direct thrombin inhibitors, and unfractionated and low molecular weight heparin (LMWH) through non-covalent hydrogen bonds and charge-charge interactions^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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- [1]. Das A, et al. Novel antidotes for target specific oral anticoagulants. *Exp Hematol Oncol*. 2015 Sep 15;4:25.
- [2]. Gomez-Outes A, et al. Specific antidotes in development for reversal of novel anticoagulants: a review. *Recent Pat Cardiovasc Drug Discov*. 2014;9(1):2-10.
- [3]. Hu TY, et al. Reversing anticoagulant effects of novel oral anticoagulants: role of ciraparantag, andexanet alfa, and idarucizumab. *Vasc Health Risk Manag*. 2016 Feb 17;12:35-44.
- [4]. Honickel M, et al. The Reversal of Direct Oral Anticoagulants in Animal Models. *Shock*. 2017 Aug;48(2):144-158.
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Caution: Product has not been fully validated for medical applications. For research use only.

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