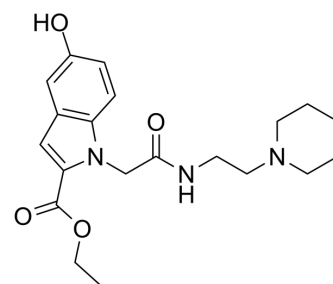


KY-02327

| | | | |
|---------------------------|---|-------|----------|
| Cat. No.: | HY-124156 | | |
| CAS No.: | 2093407-25-9 | | |
| Molecular Formula: | C ₂₀ H ₂₇ N ₃ O ₄ | | |
| Molecular Weight: | 373.45 | | |
| Target: | Wnt | | |
| Pathway: | Stem Cell/Wnt | | |
| Storage: | Powder | -20°C | 3 years |
| | | 4°C | 2 years |
| | In solvent | -80°C | 6 months |
| | | -20°C | 1 month |



SOLVENT & SOLUBILITY

| | | | | | |
|---|--|--------------------------|--------------|------------|------------|
| In Vitro | DMSO : 100 mg/mL (267.77 mM; Need ultrasonic) | | | | |
| | | Solvent Concentration | Mass 1 mg | 5 mg | 10 mg |
| | Preparing Stock Solutions | 1 mM | 2.6777 mL | 13.3887 mL | 26.7773 mL |
| | | 5 mM | 0.5355 mL | 2.6777 mL | 5.3555 mL |
| 10 mM | | 0.2678 mL | 1.3389 mL | 2.6777 mL | |
| Please refer to the solubility information to select the appropriate solvent. | | | | | |
| In Vivo | <ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 4.24 mg/mL (11.35 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (6.69 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (6.69 mM); Clear solution | | | | |

BIOLOGICAL ACTIVITY

| | |
|--------------------|--|
| Description | KY-02327, a metabolically stabilized KY-02061 analog, is a potent Dishevelled (Dvl)-CXXC5 interaction inhibitor. KY-02327 shows an activating effect on the Wnt/β-catenin pathway, resulting in promotion of osteoblast differentiation ^[1] . |
| In Vitro | <p>KY-02327 (1-10 μM; 2 days; MC3T3E1 cells, a murine pre-osteoblast cell line) increases β-catenin protein level together with Runx2 and accumulated nuclear β-catenin in a dose-dependent manner^[1].</p> <p>KY-02327 (1-10 μM) increases the mRNA levels of osteoblast differentiation markers collagen 1a (Col1a) and osteocalcin (OCN)^[1].</p> |

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

In Vivo

KY-02327 (20 mg/kg; p.o.; 5 sequential days per week for 4 weeks) successfully rescues bone loss in the ovariectomized (OVX) mouse model^[1].

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

| | |
|-----------------|--|
| Animal Model: | 8-week-old female BL6 mice (ovariectomized (OVX)-induced osteoporosis model mice) ^[1] |
| Dosage: | 20 mg/kg |
| Administration: | P.o.; administered for 5 sequential days per week for 4 weeks |
| Result: | Newly formed bones which labeled with calcein were decreased in the femur of vehicle-treated OVX mice. |

REFERENCES

[1]. Kim HY, et al. Small molecule inhibitors of the Dishevelled-CXXC5 interaction are new drug candidates for bone anabolic osteoporosis therapy. EMBO Mol Med. 2016;8(4):375-387.

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

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