# YLF-466D

**Cat. No.:** HY-15840

**CAS No.:** 1273323-67-3

**Molecular Formula:** $C_{29}H_{20}ClNO_3$

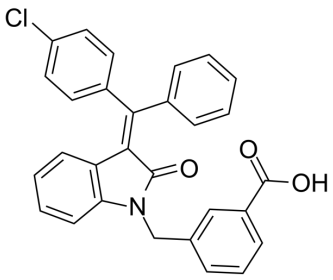
**Molecular Weight:** 465.93

**Target:** AMPK

**Pathway:** Epigenetics; PI3K/Akt/mTOR

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| | 4°C | 2 years |
| In solvent | -80°C | 2 years |
| | -20°C | 1 year |




## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : ≥ 100 mg/mL (214.62 mM)

* "≥" means soluble, but saturation unknown.

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 2.1462 mL | 10.7312 mL | 21.4625 mL |
| | 5 mM | 0.4292 mL | 2.1462 mL | 4.2925 mL |
| | 10 mM | 0.2146 mL | 1.0731 mL | 2.1462 mL |

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

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.37 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.37 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

YLF-466D is a newly developed AMPK activator, which inhibits platelet aggregation.

**$IC_{50}$ & Target**

AMPK

**In Vitro**

The effect of YLF-466D on platelet AMPK and aggregation are examined to test whether YLF-466D can stimulate AMPK in platelets and thereby suppress aggregation. Platelet AMPK is activated by YLF-466D, which is confirmed with activation-dependent phosphorylation at Thr172. Consistent with this result, YLF-466D inhibits platelet aggregation induced by thrombin. Such inhibition is observed in the aggregation elicited by ADP and collagen as well as thrombin, indicating that the antiaggregatory effect of YLF-466D is not platelet-agonist specific but common, regardless of agonist type. All the effects

on AMPK and aggregation are concentration-dependent with the highest efficacy at 150 μM. $IC_{50}$ against thrombin-, ADP- and collagen-induced aggreation are approximately 84, 55 and 87 μM, respectively[1].

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

## PROTOCOL

**Kinase Assay** [1]

Blood is collected from the abdominal aorta of ether anesthetized rats using 3.2% sodium citrate as an anticoagulant (sodium citrate:blood=1:9) and diluted with normal saline (1:1). Blood is incubated with YLF-466D (0, 50, 100 and 150 μM) for 3 min and aggregation is induced with 7.5 μg/mL Collagen. Aggregation is assessed by measuring the impedance change with a whole blood aggregometer[1].

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

## CUSTOMER VALIDATION

- Eur J Pharmacol. 2015 Aug 5;760:81-7.
- PLoS One. 2020 Oct 14;15(10):e0240517.

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## REFERENCES

[1]. Liu Y, et al. Antiplatelet effect of a newly developed AMP-activated protein kinase activator YLF-466D. Eur J Pharmacol. 2015 Aug 5;760:81-7.



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