

1 Supplementary materials

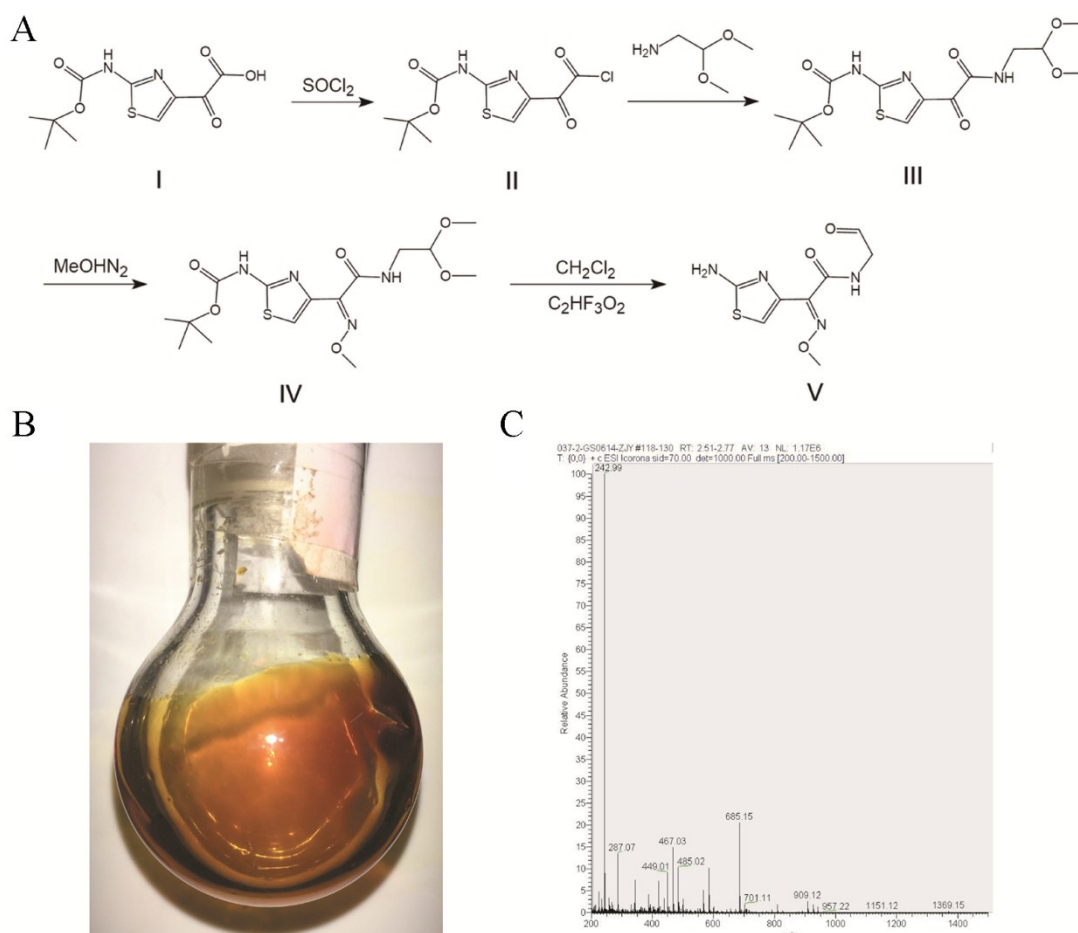
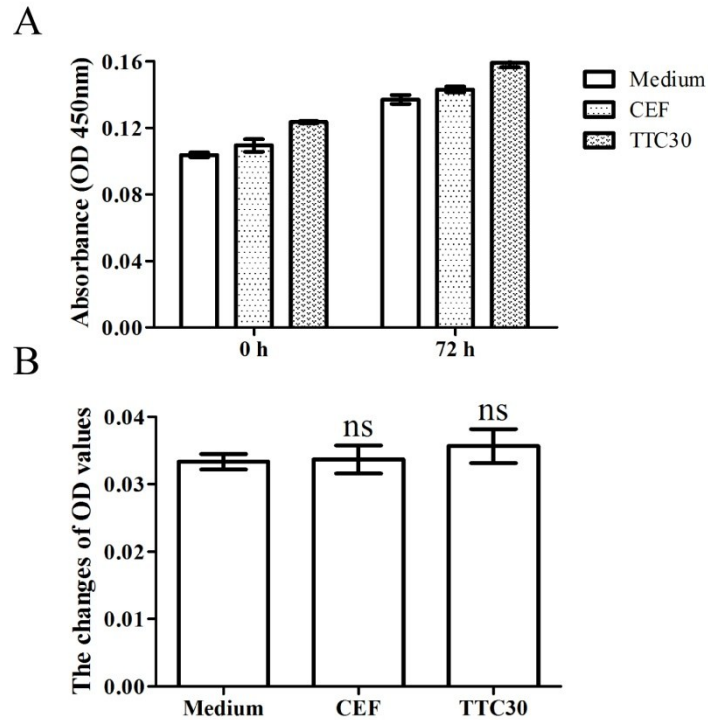


Figure S1

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4 **Figure S1.** The synthetic route and the LC-MS result of CEF-aldehyde. (A) Compound I was
5 effected under reflux reaction in thionyl chloride for 4 h. Then residual thionyl chloride was
6 removed by rotary evaporator to get compound II without further purification. Compound II
7 (0.29 g, 1 mmol), aminoacetaldehyde dimethylacetal (0.13 g, 1.2 mmol) and dichloromethane
8 (20 mL) were stirred at room temperature for 8 hours. Compound III was separated and purified
9 by column chromatography after concentration. Compound III (0.36 g, 1 mmol),
10 methoxyamine hydrochloride (0.166 g, 2 mmol) and ethanol (20 mL) were heated to 50 ° C,
11 and 1.2 g sodium hydroxide solution with a mass fraction of 33.3% was added to reflux for 8
12 hours. After concentration, the pH was adjusted to 4-5 with 6 mol/L hydrochloric acid solution,

13 then a large number of solids were precipitated. Compound IV was obtained by filtration.
14 Compound IV (1 equiv), dichloromethane (20 mL) and trifluoroacetic acid (2-3 equiv) were
15 stirred at room temperature for 2 days until the color changed from bright yellow to dark yellow
16 to get compound V which was target compound. Finally compound V was protected by
17 nitrogen. (B) The synthetic CEF-aldehyde. (C) The LC-MS result of CEF-aldehyde.



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Figure S2

20 **Figure S2.** The OD values and OD value changes of RPMI 1640 cell culture medium, CEF and
 21 TTC30 solution. (A) CEF and TTC30 were diluted in RPMI 1640 cell culture medium with pH
 22 7.4 to concentration of 1000 µg/mL and culture in 37 °C. The OD values of RPMI 1640 cell
 23 culture medium, CEF and TTC30 solution were detected at 0 h and 72 h. (B) The changes of
 24 OD values of RPMI 1640 cell culture medium, CEF and TTC30 solution in 72 hours were
 25 analyzed by one-way ANOVA followed by a Newman-Keuls test. $p < 0.05$ were considered
 26 statistically significant and ns meant no statistical difference.

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