# CBR-5884

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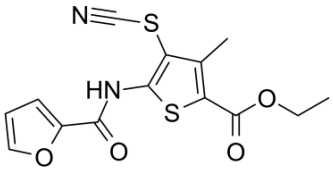
|---|---|---|---|
| **Cat. No.:** | HY-100012 | | |
| **CAS No.:** | 681159-27-3 | | |
| **Molecular Formula:** | $C_{14}H_{12}N_2O_4S_2$ | | |
| **Molecular Weight:** | 336.39 | | |
| **Target:** | Others | | |
| **Pathway:** | Others | | |
| **Storage:** | Powder | -20°C | 3 years |
| | | 4°C | 2 years |
| | In solvent | -80°C | 6 months |
| | | -20°C | 1 month |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 50 mg/mL (148.64 mM; Need ultrasonic)

$H_2O$ : < 0.1 mg/mL (insoluble)

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 2.9727 mL | 14.8637 mL | 29.7274 mL |
| 5 mM | 0.5945 mL | 2.9727 mL | 5.9455 mL |
| 10 mM | 0.2973 mL | 1.4864 mL | 2.9727 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: ≥ 2.08 mg/mL (6.18 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.18 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

CBR-5884 is an active, selective inhibitor of phosphoglycerate dehydrogenase (PHGDH) with an $IC_{50}$ of 33 μM. CBR-5884 inhibits de novo serine synthesis in cancer cells and is selectively toxic to cancer cell lines with high serine biosynthetic activity. CBR-5884 selectively inhibits the proliferation of melanoma and breast cancer lines that have a high propensity for serine synthesis[1].

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

PHGDH, serine synthesis[1]

**In Vitro**

CBR-5884 (15 or 30 μM; 3-5 days) selectively inhibits the proliferation of melanoma and breast cancer lines that have a high propensity for serine synthesis.

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

Cell Proliferation Assay[1]

| | |
|---|---|
| Cell Line: | Breast and melanoma cell lines |
| Concentration: | 15 or 30 μM |
| Incubation Time: | 3-5 days |
| Result: | Inhibited the proliferation of melanoma and breast cancer lines. |

## CUSTOMER VALIDATION

- Cell Metab. 2021 Mar 26;S1550-4131(21)00113-3.
- Mol Cell. 2019 Sep 19;75(6):1147-1160.e5.
- Nat Commun. 2019 Jun 20;10(1):2701.
- J Clin Invest. 2020 Jun 1;130(6):3253-3269.

See more customer validations on www.MedChemExpress.com

## REFERENCES

[1]. Edouard Mullarky et al. Identification of a small molecule inhibitor of 3-phosphoglycerate dehydrogenase to target serine biosynthesis in cancersProc Natl Acad Sci U S A, 2016 Feb 16, 113(7):1778-83.



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