# Fatostatin hydrobromide

**Cat. No.:** HY-14452A

**CAS No.:** 298197-04-3

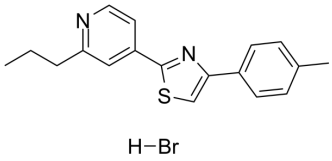
**Molecular Formula:** $C_{18}H_{19}BrN_2S$

**Molecular Weight:** 375.33

**Target:** Fatty Acid Synthase (FASN)

**Pathway:** Metabolic Enzyme/Protease

**Storage:** 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)




## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 25 mg/mL (66.61 mM; Need ultrasonic)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 2.6643 mL | 13.3216 mL | 26.6432 mL |
| | 5 mM | 0.5329 mL | 2.6643 mL | 5.3286 mL |
| | 10 mM | 0.2664 mL | 1.3322 mL | 2.6643 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 (5.54 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 1 mg/mL (2.66 mM); Suspended solution; Need ultrasonic

## BIOLOGICAL ACTIVITY

**Description**

Fatostatin hydrobromide (125B11 hydrobromide), a specific inhibitor of SREBP activation, impairs the activation of SREBP-1 and SREBP-2. Fatostatin hydrobromide binds to SCAP (SREBP cleavage-activating protein), and inhibits the ER-Golgi translocation of SREBPs. Fatostatin hydrobromide decreases the transcription of lipogenic genes in cells. Fatostatin hydrobromide possesses antitumor properties, and lowers hyperglycemia in ob/ob mice[1][2].

**In Vitro**

Fatostatin hydrobromide (125B11 hydrobromide) (0.1-1 μM; 3 days) inhibits the androgen-independent prostate cancer cell proliferation ($IC_{50}$=0.1 μM) in an independent of the known IGF1-signaling pathway. Fatostatin hydrobromide inhibits insulin-induced adipogenesis of 3T3-L1 cells[1].

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

Cell Proliferation Assay[1]

| | |
|---|---|
| Cell Line: | DU-145 cells |
| Concentration: | 0.1, 1 μM |
| Incubation Time: | 3 days |
| Result: | Impaired the IGF1-induced growth at an $IC_{50}$ of 0.1 μM. |

**In Vivo**

Fatostatin hydrobromide (125B11 hydrobromide) (30 mg/kg; 150 mL; i.p.; daily for 28 days) reduces adiposity, ameliorates fatty liver by reducing triglyceride (TG) storage, and lowers hyperglycemia in ob/ob mice[2].

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

| | |
|---|---|
| Animal Model: | Four-to-five-week-old homozygous male obese (ob/ob) mice (C57BL/6J)[2] |
| Dosage: | 30 mg/kg; 150 mL |
| Administration: | i.p. injection; daily for 28 days |
| Result: | Blocked increases in body weight, blood glucose, and hepatic fat accumulation in obese ob/ob mice, even under uncontrolled food intake. |

## CUSTOMER VALIDATION

- Cell Metab. 2021 Aug 3;33(8):1655-1670.e8.
- Autophagy. 2021 Jul;17(7):1592-1613.
- Cell Death Differ. 2021 Jun;28(6):2001-2018.
- J Exp Clin Cancer Res. 2019 May 29;38(1):228.
- Cell Death Dis. 2021 May 26;12(6):544.

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## REFERENCES

[1]. Choi Y, et al. Identification of bioactive molecules by adipogenesis profiling of organic compounds. J Biol Chem. 2003 Feb 28;278(9):7320-4.

[2]. Kamisuki S, et al. A small molecule that blocks fat synthesis by inhibiting the activation of SREBP. Chem Biol. 2009 Aug 28;16(8):882-92.



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