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# Produktinformation

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- Laborgeräte & Service

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See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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# 8-Bromo-cAMP

**Cat. No.:** HY-12306A

**CAS No.:** 23583-48-4

**Molecular Formula:** $C_{10}H_{11}BrN_5O_6P$

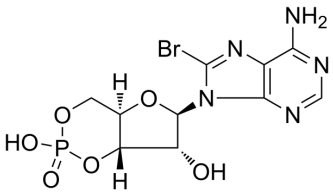
**Molecular Weight:** 408.1

**Target:** PKA; Apoptosis

**Pathway:** Stem Cell/Wnt; TGF-beta/Smad; Apoptosis

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| | 4°C | 2 years |
| In solvent | -80°C | 6 months |
| | -20°C | 1 month |



## SOLVENT & SOLUBILITY

**In Vitro**

$H_2O$ : 5.74 mg/mL (14.07 mM; ultrasonic and warming and adjust pH to 9 with 1 M NaOH and heat to 60°C)

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 2.4504 mL | 12.2519 mL | 24.5038 mL |
| | 5 mM | 0.4901 mL | 2.4504 mL | 4.9008 mL |
| | 10 mM | 0.2450 mL | 1.2252 mL | 2.4504 mL |

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

## BIOLOGICAL ACTIVITY

**Description**

8-Bromo-cAMP (8-Br-Camp), a cyclic AMP analog, is an activator of cyclic AMP-dependent protein kinase (PKA). 8-Bromo-cAMP has anti-proliferative and apoptotic effects against cancer cells[1][2].

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

PKA[1]

**In Vitro**

8-Bromo-cAMP (0.1/0.5 mM) enhances the reprogramming efficiency of human neonatal foreskin fibroblast (HFF1) cells, and 0.1 mM of 8-Bromo-cAMP shows a synergistic effect with Valproic acid (HY-10585) (0.5 mM)[1].

8-Bromo-cAMP (20 μM, 24 and 48 h) induces apoptosis in esophageal cancer cell line (Eca-109)[2].

8-Bromo-cAMP (0.5 mM, 2 days) induces decidualization of human endometrial stromal cells[3].

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

**In Vivo**

8-Bromo-cAMP (60 mg/kg/day, i.p., 7 days) reduces tumor in CT26 tumor mice[4].

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

| | |
|---|---|
| Animal Model: | CT26 tumor mice[4] |
| Dosage: | 60 mg/kg/day |
| Administration: | i.p., 7 days |
| Result: | Decreases amounts of primary CRC tumor nodules and liver metastases.<br>Reduces vasculogenic mimicry (PAS–CD31 staining of colorectal and intestinal tumors).<br>Inhibits cAMP and VEGF expression, increases expression of PKA in tumor tissues. |

## CUSTOMER VALIDATION

- J Hazard Mater. 2024 Jun 7:475:134854.
- Part Fibre Toxicol. 2022 Feb 17;19(1):13.
- Sci Total Environ. 2022 Oct 10;842:156854.
- Cell Mol Life Sci. 2022 Nov 13;79(12):589.
- Cell Oncol. 2023 Mar 20.

See more customer validations on www.MedChemExpress.com

## REFERENCES

[1]. Wang HM, et al. Dual effects of 8-Br-cAMP on differentiation and apoptosis of human esophageal cancer cell line Eca-109. World J Gastroenterol. 2005 Nov 7;11(41):6538-42.

[2]. Baek MO, et al. Differential regulation of mTORC1 and mTORC2 is critical for 8-Br-cAMP-induced decidualization. Exp Mol Med. 2018 Oct 30;50(10):1-11.

[3]. Wang S, et al. Angiogenesis and vasculogenic mimicry are inhibited by 8-Br-cAMP through activation of the cAMP/PKA pathway in colorectal cancer. Onco Targets Ther. 2018 Jul 2;11:3765-3774

[4]. Wang Y, et al. A cyclic AMP analog, 8-Br-cAMP, enhances the induction of pluripotency in human fibroblast cells. Stem Cell Rev. 2011 Jun;7(2):331-41.



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