

Product Information

**8-BROMOADENOSINE 3':5'-CYCLIC MONOPHOSPHATE,
Free Acid
Sigma Prod. No. B5386
Storage Temperature -20°C**

CAS NUMBER: 23583-48-4

SYNONYMS: 8-Bromo-cAMP, 8-Br-A-3:5-MP

PHYSICAL DESCRIPTION:

Appearance: lyophilized, white powder

Molecular formula: C₁₀H₁₀BrN₅O₆P

Formula Weight: 408.1 (anhydrous)

E_{mM}(263_{nm}) = 16.4 (0.1 N HCl)

A₂₅₀/A₂₆₀ = 0.68

A₂₈₀/A₂₆₀ = 0.44

A₂₉₀/A₂₆₀ = 0.11

DESCRIPTION:

8-Bromoadenosine 3':5'-Cyclic Monophosphate is prepared synthetically.¹

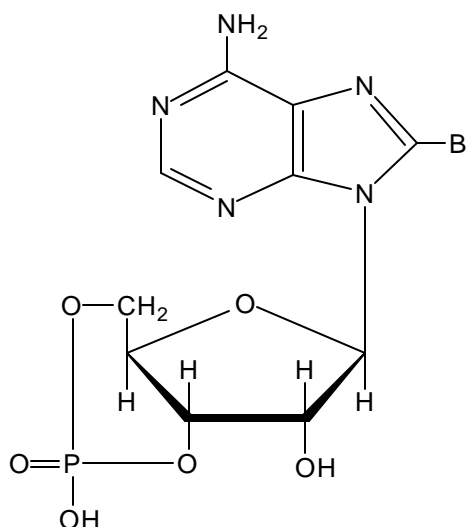
STORAGE:

8-Br-cAMP is sensitive to light and moisture. This product should be stored at less than -20°C and in the dark.

SOLUBILITY / SOLUTION STABILITY:

This product is soluble in alkaline conditions. Sigma routinely tests solubility at 50 mg/ml in 1 N ammonium hydroxide. .

The solution should be stored at -20°C, protected from light and will be stable for up to 6 months.



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APPLICATIONS:

Progesterone receptor (PR) in the chicken oviduct is a phosphoprotein that regulates gene transcription in the presence of progesterone. 8-Br-cAMP has been used in place of progesterone to stimulate phosphorylation of the PR which participates in the regulation of PR-mediated transcription. It appears that the 8-Br-cAMP mimics progesterone-dependent, receptor-mediated transcription in the absence of progesterone. This finding suggests that phosphorylation of the PR or other proteins in the transcription complex can modulate PR-mediated transcriptions in vivo.^{2,3,4}

8-Br-cAMP and other analogs of cyclic or non-cyclic AMP are used to inhibit the growth of cultured cell lines.⁵

REFERENCES:

1. Muneyama, K. et al., *Biochemistry*, 10(12), 2390-2395 (1971).
2. Denner, L. et al., *Science*, 250, 1740-1743 (1990).
3. Denner, L. et al., *J. Biol. Chem.*, 265(27), 16548-16555 (1990).
4. Le Goff, P. et al., *J. Biol. Chem.*, 269(6), 4458-4466 (1994).
5. Martin, T. and Kowalchuk, J., *Science*, 213(4), 1120-1122 (1981).

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