Hexadimethrine bromide

Cat. No.: HY-112735

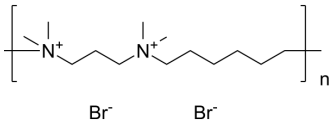
CAS No.: 28728-55-4

Molecular Formula: $(C_{13}H_{30}N_2Br_2)n$.

Target: Biochemical Assay Reagents

Pathway: Others

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



SOLVENT & SOLUBILITY

In Vitro	H_2O : 100 mg/mL (Need ultrasonic) DMSO : 5 mg/mL (Need ultrasonic and warming)
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (Infinity mM); Clear solution; Need ultrasonic 2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 0.5 mg/mL (Infinity mM); Clear solution 3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 0.5 mg/mL (Infinity mM); Clear solution 4. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: 0.5 mg/mL (Infinity mM); Clear solution; Need warming

BIOLOGICAL ACTIVITY

Description	Hexadimethrine bromide (Polybrene) is a cationic polymer used routinely to enhance the efficiency of retrovirus vector-mediated gene transfer[1][2].
In Vitro	Hexadimethrine bromide inhibits human mesenchymal stem cell proliferation during lentiviral transduction. Hexadimethrine bromide is considered non-toxic at low concentrations, but has been found to negatively affect cell proliferation in some cell types at concentrations greater than 10 μg/mL. Trypsinized cells exposed to Hexadimethrine bromide are visibly larger in size when viewed under the microscope[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	Trypsinized cells are washed and resuspended in medium at 2×10^4 cells/mL with or without rhFGF-2 (final concentration=10 ng/mL, PeproTech) and with or without Hexadimethrine bromide at a final Hexadimethrine bromide concentration of 1, 4, or 8 μg/mL. The different conditions are seeded in 96-well plates at 1×10^3 cells in 50 μL per well in triplicate and cultured at

37°C, 5% CO_2. After 6, 9, or 24 hr, the medium is changed and subsequent medium changes occurred every 3-4 days with 50 µL of ± FGF-2 medium (10 ng/mL). Plates are harvested on day 4, 7, 14, and 21 by removing the medium and placing the plates in the -80°C freezer until the day of analysis. The CyQUANT assay is then performed on the wells[1].

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

CUSTOMER VALIDATION

- Mil Med Res. 2023 Jul 25;10(1):34.
- Adv Funct Mater. 2019, 1808556.
- Nat Commun. 2023 Oct 23;14(1):6690.
- Nat Commun. 2023 May 2;14(1):2523.
- Adv Sci (Weinh). 2022 Jun 2;e2104823.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Lin P, et al. Polybrene inhibits human mesenchymal stem cell proliferation during lentiviral transduction. PLoS One. 2011;6(8):e23891.

[2]. Abe A, et al. Polybrene increases the efficiency of gene transfer by lipofection. Gene Ther. 1998;5(5):708-711.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA