bio-techne
TOCRIS

Print Date: Mar 19th 2025

Certificate of Analysis

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Product Name: **Polybrene** **Catalog No.: 7711** **Batch No.: 2**

CAS Number: 28728-55-4

IUPAC Name: 1,5-Dimethyl-1,5-diazaundecamethylene polymethobromide

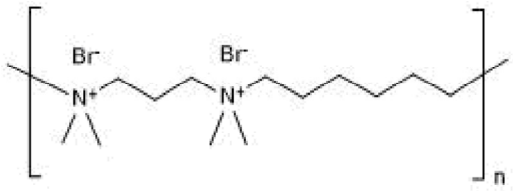
1. PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance: White solid

Solubility: water to 100 mg/ml

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

Titration by AgNO3: 102.1 %

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CAS Number: 28728-55-4

IUPAC Name: 1,5-Dimethyl-1,5-diazaundecamethylene polymethobromide

Description:

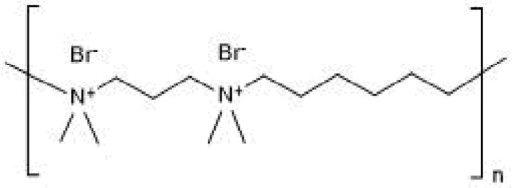
Polybrene is a cationic polymer that improves lentiviral and adenoviral transduction efficiency in mammalian cells in vitro. It also enhances DNA transfection in many types of cells. It has a neutralizing effect on negatively charged DNA and viral particles which facilitates their attachment and entry into host cells. Polybrene is suitable for use with CRISPR/Cas9 protocols. It is commonly used in combination with Protamine sulfate (Cat. No. 8822) to enhance the delivery of adeno-associated virus (AAV) and lentiviral vectors. Polybrene is a lyophilized solid and can be prepared as a stock solution by adding 1 mL of sterile ultra-pure water... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

Physical Appearance: White solid

Minimum Purity: ≥95%

Batch Molecular Structure:



Storage: Store at +4°C. This product is packaged under an inert atmosphere.

Solubility & Usage Info:

water to 100 mg/ml

This product is supplied in lyophilized form. It may appear as a solid, gel or glass-like form. Although purity is unaffected, it may be difficult to extract the full quantity from the vial. In such a situation, we recommend that solutions are made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Joung *et al* (2022) CRISPR activation screen identifies BCL-2 proteins and B3GNT2 as drivers of cancer resistance to T cell-mediated cytotoxicity. Nat.Commun ***13*** 1606. PMID: 35338135.

Strack (2022) Breaking entry-and species barriers: LentiBOOST ® Plus polybrene enhances transduction efficacy of dendritic cells and monocytes by adenovirus 5. Viruses ***14*** 92. PMID: 35062296.

Bolis *et al* (2021) Dynamic prostate cancer transcriptome analysis delineates the trajectory to disease progression. Nat.Commun. ***12*** 7033. PMID: 34857732.

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