

## Certificate of Analysis

***www.tocris.com***

**Product Name:** PEI STAR™ transfection reagent

**Catalog No.:** 7854

**Batch No.:** 8

CAS Number: 49553-93-7

IUPAC Name: Poly[imino(1,2-ethanediyl)] hydrochloride

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Physical Appearance:** White solid

**Storage:** Store at RT

### 2. ANALYTICAL DATA

**<sup>1</sup>H NMR:** Consistent with structure

**Performance:** Pass

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

PEI STAR™ is a chemically-defined, high-performance polyethylenimine (PEI) transfection reagent for cost-effective, affordable and scalable transient gene expression. PEI is a synthetic polymer with an exceptionally high positive charge density in pH-neutral solutions. Positively charged PEI binds strongly to negatively charged DNA and imparts a net cationic charge, allowing the DNA to enter cells. PEI is a non-viral vector commonly used to transfect HEK293 and CHO cells. Applications include production of recombinant proteins, antibodies and viruses. Pre-dissolved, ready-to-use formulation of PEI STAR™ also available: PEI STAR-G... Please see product specific page on [www.tocris.com](http://www.tocris.com) for full description.

**Physical and Chemical Properties:**

Physical Appearance: White solid

**Storage:** Store at RT

**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:**

**Han *et al*** (2021) Aberrant role of pyruvate kinase M2 in the regulation of gamma-secretase and memory deficits in Alzheimer's disease. *Cell Rep.* **37** 110102. PMID: 34879266.

**Trivedi *et al*** (2021) Comparison of highly pure rAAV9 vector stocks produced in suspension by PEI transfection or HSV infection reveals striking quantitative and qualitative differences. *Mol. Ther. Methods Clin. Dev.* **24** 154. PMID: 35071688.

**Huang *et al*** (2013) AAV2 production with optimized N/P ratio and PEI-mediated transfection results in low toxicity and high titer for *in vitro* and *in vivo* applications. *J. Virol. Methods* **193** 270. PMID: 23791963.

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