Excellgen
Protein Engineering

NLS-Cre Recombinase

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Introduction

Recombinant Cre recombinase NLS-Cre was purified from an *E. coli* strain carrying an engineered plasmid encoding Cre Recombinase from bacteriophage P1 with additional N-terminal 6XHis tag and an NLS sequence (PKKKRKV). Incubation of fibroblast reporter cells with 1~5 μM HTNC and Tat-peptide for 1 to 2 hours can result in tranduction of ~60 % of the cells.

Product Information

- **Catalog #:** EG-1067
- **Accession #:** YP_006472
- **Amino Acid Sequence:**
  MGSSHHHHHHPKKKRKVSNLLTVHQNLPALPVDATSDEVRKNLMDMFRDRQAFSEHTWKM
  LLSVCRSWAAWCKLNNRKWFPAEPEDVRDYLLYLQARGLAVKTIQQHLGQLNMLHRRSGL
  PRPSDSNAVSLVMRRIRKENVDAGERAKQALAFERTDFDQVRSLMENSDRCQDIRNLAFL
  GIAYNTLLRIAEIARIRVKDISRTDGGRMLIHIGRTKTLVSTAGVEKALSLGVTKLVERW
  ISVSGVADDPNNYLFCRVRKNGVAAPSATSQLSTRALEGIFEATHRLIYGAKDDSGQRYL
  AWSGHSARVGAARDMARAGVSIPEIMQAGGWTNVNIVMNYIRNLDSETGAMVRLLEDGD

- **Molecular Weight:** 40 kDa
- **Endotoxin Level:** < 1 EU/ug
- **Expression Host:** *E. coli*
- **Purification Methods:** FPLC
- **Size:** 1 mg
- **Shipping Temperature:** Dry ice
- **Storage Buffer**: 20 mM HEPES, 1.5 mM NaCl, 15% Trihalose, 100mM Arginine, pH 7.4 @ 25°C
- **Storage Temperature**: –80 °C or -20 °C
- **Purity:** >95% by SDS-PAGE

Applications:

* In vitro LoxP recombination for subcloning or vector/clone engineering
* Transduction into cultured cells including stem cells *ex Vivo*

Transduction of Cre recombinase (NLS-Cre) into cultured cells

1. For some sensitive cell lines: remove inhibitory reagents (glycerol, salt etc) using a desalting column (*e.g.,* PD-10 d*esalting column from GE). Make sure the desalting*

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column is pre-equilibrated with culture medium and desalting steps must be performed inside a biosafety hood to avoid contamination.

2. Add appropriate amount (1 to 5 μM) of NLS-Cre and optionally together with cell-penetrating peptides to the medium and incubate up to 24 hours. Note: serum-free medium can significantly increase transduction efficiency.
3. Change back to normal growth medium.
4. Determine transduction efficiency.