Excellgen
Protein Engineering

Cre Recombinase

15601 Crabbs Branch Way
Rockville, MD 20855-2743
Phone: 855-278-2398
240-582-9838
Email: crm@excellgen.com
http://excellgen.com

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 for 1 to 2 hours can result in tranduction of ~60 % of the cells. Addition of 100 μM choroquine to culture medium may enhance transduction and recombination.

Product Information

- **Catalog #:** EG-1067
- **Accession #:** YP_006472
- **Amino Acid Sequence:**
  MGSSHHHHHHPKKKRKVSNLLTVHQNLPALPVDATSDEVRKNLMDMFRDRQAFSEHTWKM
  LLSVCRSWAAWCKLNNRKWFPAEPEDVRDYLLYLQARGLAVKTIQQHLGQLNMLHRRSGL
  PRPSDSNAVSLVMRRIRKENVDAGERAKQALAFERTDFDQVRSLMENSDRCQDIRNLAFL
  GIAYNTLLRIAEIARIRVKDISRTDGGRMLIHIGRTKTLVSTAGVEKALSLGVTKLVERW
  ISVSGVADDPNNYLFCRVRKNGVAAPSATSQLSTRALEGIFEATHRLIYGAKDDSGQRYL
  AWSGHSARVGAARDMARAGVSIPEIMQAGGWTNVNIVMNYIRNLDSETGAMVRLLEDGD
- **Molecular Weight:** 43 kDa
- **Endotoxin Level:** < 1 EU/ug
- **Expression Host:** *E. coli*
- **Purification Methods:** FPLC
- **Shipping Temperature:** ambient temperature
- **Storage Buffer**: 20 mM HEPES, 600 mM NaCl, 15% trehalose, 1 mM DTT, pH 7.4 @ 25°C
- **Storage Temperature**: –80 °C or -20 °C
- **Purity:** >98% by SDS-PAGE and HPLC analysis

15601 Crabbs Branch Way
Rockville, MD 20855-2743
Phone: 855-278-2398
240-582-9838
Email: crm@excellgen.com
http://excellgen.com

Applications:

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

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

1. Dissolve dried enzyme in minimal amount of culture medium or water at 4 oC.
2. 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 column is pre-equilibrated with culture medium and desalting steps must be performed inside a biosafety hood to avoid contamination.*
1. Add appropriate amount (1 to 5 μM) of HNC-Cre to the medium and incubate up to 24 hours. Note: serum-free medium can significantly increase transduction efficiency.
2. Change back to normal growth medium.
3. Determine transduction efficiency.

Note: avoid repeated freezing after hydration, store the Cre recombinase enzyme at 4 oC. For long term storage, add glycerol to 50% and store at -20 oC or -80 oC.

Heat Inactivation: 40 units at 70°C for 10 minutes