

pCMV-DsRed-Express Vector

Catalog No.

632416

Amount

20 µg

Lot Number

Specified on product label.

Description

pCMV-DsRed-Express is a mammalian expression vector designed for use as a cotransfection marker, together with an expression construct of interest. It constitutively expresses the red fluorescent protein DsRed-Express, which can be detected by fluorescence microscopy to provide direct visual evidence of transfection. Cells can also be sorted by flow cytometry to enrich for transfected cells. pCMV-DsRed-Express encodes DsRed-Express, a variant of *Discosoma* sp. red fluorescent protein (DsRed). DsRed-Express contains nine amino acid substitutions which improve the solubility of the protein, reduce the time from transfection to detection of red fluorescence, and decrease the level of residual green emission. When DsRed-Express is expressed in mammalian cell cultures, red-emitting cells can be detected by either fluorescence microscopy or flow cytometry 8–12 hours after transfection. Although DsRed-Express most likely forms the same tetrameric structure as wild-type DsRed, DsRed-Express displays a reduced tendency to aggregate. The DsRed-Express coding sequence is human codon-optimized for high expression in mammalian cells.

Package Contents

- 20 µg pCMV-DsRed-Express Vector

Storage Conditions

- Store at –20°C.
- Spin briefly to recover contents.
- Avoid repeated freeze/thaw cycles.

Shelf Life

- 1 year from date of receipt under proper storage conditions.

Storage Buffer

- 10 mM Tris-HCl (pH 8.0), 1 mM EDTA (pH 8.0)

Concentration

- 500 ng/µl

Shipping Conditions

- Dry ice (–70°C)

Takara Bio USA, Inc.

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Certificate of Analysis

Cat. No. 632416

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Propagation in *E. coli*

- Suitable host strains: DH5 α , HB101 and other general purpose strains. Single-stranded DNA production requires a host containing an F plasmid such as JM109 or XL1-Blue.
- Selectable marker: plasmid confers resistance to kanamycin (50 μ g/ml) to *E. coli* hosts.
- *E. coli* replication origin: pUC
- Copy number: High

Excitation and Emission Maxima of DsRed-Express

- Excitation: 557 nm
- Emission: 579 nm

Quality Control Data

Plasmid Identity & Purity

- Digestion with the indicated restriction enzymes produced fragments of the indicated sizes on a 0.8% agarose/EtBr gel:

Enzyme	Fragment(s) (kb)
PstI	4.6
StuI	3.2 & 1.4

- Vector identity was confirmed by sequencing.
- A₂₆₀/A₂₈₀: 1.8–2.0

It is certified that this product meets the above specifications, as reviewed and approved by the Quality Department.

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NOTICE TO PURCHASER:

Our products are to be used for **Research Use Only**. They may not be used for any other purpose, including, but not limited to, use in humans, therapeutic or diagnostic use, or commercial use of any kind. Our products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products or to provide a service to third parties without our prior written approval.

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