

## pEF1 $\alpha$ -IRES-DsRed-Express2 Vector

| Catalog No. | Amount     | Lot Number                  |
|-------------|------------|-----------------------------|
| 631980      | 10 $\mu$ g | Specified on product label. |

### Description

pEF1 $\alpha$ -IRES-DsRed-Express2 is a bicistronic mammalian expression vector that allows the simultaneous, constitutive expression of a protein of interest and the red fluorescent protein DsRed-Express2. Expression of the bicistronic transcript is driven by the human elongation factor 1 alpha (EF1 $\alpha$ ) promoter, which continues to be constitutively active even after stable integration of the vector into the host cell genome. Stable expression of the bicistronic transcript allows the monitoring of a variety of cellular processes (such as differentiation in primary or stem cells) without the transgene silencing associated with CMV promoters. In addition, the vector allows efficient flow cytometric detection of stably or transiently transfected mammalian cells expressing DsRed-Express2 and a protein of interest, without time-consuming drug and clonal selection.

### Package Contents

- 1 tube pEF1 $\alpha$ -IRES-DsRed-Express2 Vector (20  $\mu$ l/tube)

### Storage Conditions

- Store plasmid at  $-20^{\circ}\text{C}$ .
- Spin briefly to recover contents.
- Avoid repeated freeze/thaw cycles.

### Expiration Date

- Specified on product label.

### Storage Buffer

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

### Concentration

- 500 ng/ $\mu$ l

### Shipping Conditions

- Dry ice

### Propagation in *E. coli*

- Suitable host strains: DH5 $\alpha$  and other general purpose strains. Single-stranded DNA production requires a host containing an F plasmid such as JM101 or XL1-Blue.
- Selectable marker: plasmid confers resistance to kanamycin (50  $\mu$ g/ml) in *E. coli* hosts.
- *E. coli* replication origin: pUC
- Copy number: high

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#### Takara Bio USA, Inc.

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## Excitation and Emission Maxima of DsRed-Express2

- Excitation: 554 nm
- Emission: 591 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:

| <b>Enzyme</b> | <b>Fragments</b> |
|---------------|------------------|
| BamHI         | 6.0 kb           |
| AgeI/NheI     | 1.1 & 4.9 kb     |

- Vector identity was confirmed by sequencing.
- $A_{260}/A_{280}$ : 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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### CATALOG NO.

631980

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### STATEMENT 69

The DsRed-Monomer, DsRed Express, E2-Crimson and the Fruit Fluorescent Proteins are covered by one or more of the following U.S. Patents: 7,250,298; 7,671,185; 7,910,714; 8,664,471 and 8,679,749.

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3/24/2023

# Notice to Purchaser



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