FastCONTROL™ Dual Reporter Plasmid Controls

To fast, convenient and flexible target cell transfection control for high co-expression of two reporter genes

Includes for 100 assays:

· 15 µL FastCONTROL™ Dual Reporter Plasmid Control (1 µg/µL)

Plus Version

Includes for 100 assays:

· 15 µL FastCONTROL™ Dual Reporter Plasmid Control (1 µg/µL)
· 0.2 mL CANFAST™ Transfection reagent (1 mg/mL)

Related Products:

· pOnebyOne™ Mammalian expression vectors (p.22)
· WideUSE™ Plasmid Purification Kit (p.92)
· Custom Cloning services (p.140)
· Ampicillin (p.126)
· pOnebyOne™ MCS1-2A-MCS2

Description:

FastCONTROL™ Dual Reporter Plasmid Controls are fast, convenient and flexible target cell transfection control ideal for high co-expression of two reporter genes drive for ubiquitous, strong and constitutive promoters [cytomegalovirus promoter (Pcmv) or elongation factor 1 alpha promoter (PEF1α)].

The reporter proteins are produced in stoichiometric proportion because the expression cassettes are based on 2A sequence.

This family of vectors 2A-like sequence are used by several families of viruses for producing multiple polypeptides. Unlike IRES based vectors where protein expression from the insert downstream IRES is lower than of the upstream insert, 2A based vectors allow both proteins are produced in identical proportion.

2A-mediated cleavage is a universal phenomenon in all eukaryotic cells. The 2A peptides have been used successfully to generate multiple proteins from a single promoter in some biological models: plants, zebrafish, transgenic mice and human cell lines.

Advantages & Features:

- ✔ **Fast:** available combination of 2 cell location markers in one vector.
- ✔ **Convenient:** available in Lentiviral, Retroviral or non-viral vectors, for immediate *in vivo* and *in vitro* expression.
- ✔ **Compatible with transient or stable transfections.**
- ✔ **Flexible:** available with different mammalian resistance markers and Dual Reporter genes combination for different cell location.

Applications:

- ✔ Control for assessing the efficiency of transfection in mammalian cells.
- ✔ Targering of different cell locations.
- ✔ Obtention of cell lines with reporter proteins.

Quality control:

- ✔ The quantity and quality of purified DNA attend to:
  - · Ratio 260/280 (1.8-2.0).
  - · Agarose gel electrophoresis.
  - · Digestion with restriction endonucleases.
- ✔ Transient Transfection CHO-K1 (625 cells / well with these vectors) provides a SEAP activity >1,000 fold higher than untransfected cells themselves.
- ✔ The surface expression of NGFR in transiently transfected CHO > 60%.
- ✔ Expression of eGFP in transient intracellular CHO > 60%.