Certificate of Analysis

pCMV-Tet3G Vector

Catalog No.	Amount	Lot Number
631335 (Not sold separately) Sold as part of 631159, 631164, 631165, 631166, 631168, 631337, 631338, 631339, 635079, 635084	20 µl (500 ng/µl)	Specified on product label.

Description

The pCMV-Tet3G Vector expresses Tet-On® 3G, a tetracycline-controlled transactivator that exhibits high activity in the presence of the inducer doxycycline (Dox) and exceptionally low activity in its absence. Tet-On 3G results from the fusion of amino acids 1–207 of a mutant Tet repressor (TetR) to 39 amino acids that form three minimal "F"-type transcriptional activation domains from the herpes simplex virus VP16 protein. Tet-On 3G was derived from Tet-On Advanced (1–4); as a result, it's fully synthetic, lacks cryptic splice sites, and is codon-optimized for stable expression in mammalian cells. Compared to both of its predecessors, this 3rd generation Tet-On transactivator demonstrates increased sensitivity to Dox (1). Constitutive expression of Tet-On 3G is driven by the human cytomegalovirus immediately early promoter (PCMV IE). Note: An EF1α version of this vector is available for cell lines in which the CMV promoter is silenced.

pCMV-Tet3G is used to develop stable Tet-On 3G cell lines, which are hosts for Tet-inducible gene expression systems. To create a Tet-inducible expression system, a vector containing a gene of interest under the control of the Tet-inducible TRE3G promoter (PTRE3G) is transfected into a Tet-On 3G cell line. The addition of Dox to the system causes Tet-On 3G to undergo a conformational change that allows it to bind to PTRE3G, activating transcription of the gene of interest in a highly dose-dependent manner.

Package Contents

- 20 µl pCMV-Tet3G Vector

Storage Conditions

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

Expiration Date

- Specified on product label.

Storage Buffer

- 10 mM Tris-HCI (pH 8.0)
- 1 mM EDTA (pH 8.0)

Concentration

- 500 ng/µl

Takara Bio USA, Inc.
2560 Orchard Parkway, San Jose, CA 95131, USA
U.S. Technical Support: technical_support@takarabio.com

United States/Canada 800.662.2566
Asia Pacific +1.650.919.7300
Europe +33.(0)1.3904.6880
Japan +81.(0)77.565.6999

(113022)

Certificate of Analysis

Cat. No. 631335

pCMV-Tet3G Vector (Not sold separately)
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Shipping Conditions

- Dry ice

Product Documents

Documents for our products are available for download at **takarabio.com/manuals**
The following documents apply to this product:

- Tet-On 3G Expression Systems User Manual (PT5148-1)

Propagation in *E. coli*

- Recommended host strain: Stellar™ Competent Cells (Cat. No. 636763).
- Selectable marker: plasmids confer resistance to ampicillin (100 µg/ml) in *E. coli* hosts.
- *E. coli* replication origin: pUC

References

1. Zhou, X. *et al*. (2006) *Gene Ther*. **13**(19):1382-1390.
2. Urlinger, S. *et al*. (2000) *Proc. Natl. Acad. Sci. USA* **97**(14):7963–7968.
3. Gossen, M. & Bujard, H. (1992) *Proc. Natl. Acad. Sci. USA* **89**(12):5547–5551.
4. Gossen, M. *et al*. (1995) *Science* **268**(5218):1766–1769.

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:

Vector	Enzyme(s)	Size (kb)
pCMV-Tet3G	EcoRI	7.1 kb
	EcoRI & HindIII	1.2 & 5.9 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.

Notice to Purchaser

pCMV-Tet3G Vector

CATALOG NO.

631335

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.

Your use of this product is also subject to compliance with the licensing requirements, listed below if applicable, and described on the product´s web page at http://www.takarabio.com. It is your responsibility to review, understand and adhere to any restrictions imposed by these statements.

STATEMENT 42

Use of the Tetracycline controllable expression systems (the "Tet Technology") is covered by a series of patents including U.S. Patent # 8383364, # 9181556 , European patents EP # 1954811, #2352833 and corresponding patent claims outside these regions which are proprietary to TET Systems GmbH & Co. KG. Academic research institutions are granted an automatic license with the purchase of this product to use the Tet Technology only for internal, academic research purposes, which license specifically excludes the right to sell, or otherwise transfer, the Tet Technology or its component parts to third parties. Notwithstanding the above, academic and not-for profit research institutions whose research using the Tet Technology is sponsored by for profit organizations, which shall receive ownership to any data and results stemming from the sponsored research, shall need a commercial license agreement from TET Systems in order to use the Tet Technology. In accepting this license, all users acknowledge that the Tet Technology is experimental in nature. TET Systems GmbH & Co. KG makes no warranties, express or implied or of any kind, and hereby disclaims any warranties, representations, or guarantees of any kind as to the Tet Technology, patents, or products. All others are invited to request a license from TET Systems GmbH & Co. KG prior to purchasing these reagents or using them for any purpose. Takara Bio USA, Inc. is required by its licensing agreement to submit a report of all purchasers of the Tet-controllable expression system to TET Systems.

For license information, please contact:
GSF/CEO
TET Systems GmbH & Co. KG,
Im Neuenheimer Feld 582
69120 Heidelberg
Germany
Tel: +49 6221 5880400
Fax: +49 6221 5880404
email: info@tetsystems.com
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2560 Orchard Parkway, San Jose, CA 95131, USA
U.S. Technical Support: technical_support@takarabio.com

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12/1/2022

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TRADEMARKS:

Takara Bio USA, Inc.
2560 Orchard Parkway, San Jose, CA 95131, USA
U.S. Technical Support: technical_support@takarabio.com

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