targetingsystems

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A new addition to the LentiGlo product line of prepackaged ready-to use lentiviruses
Lenti-UBC-ReFLuc-T2A-mVermilion

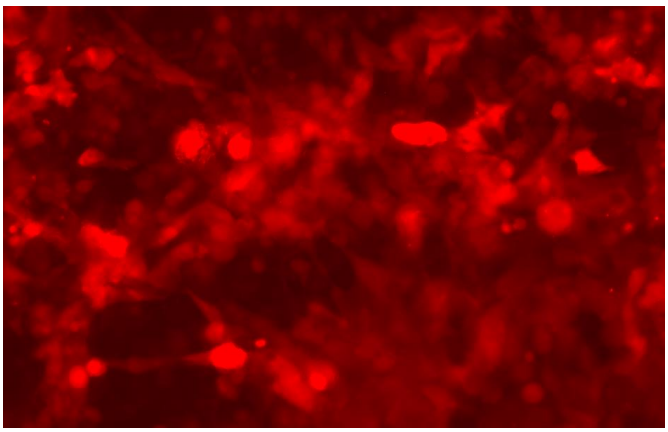
Catalog # LP-62

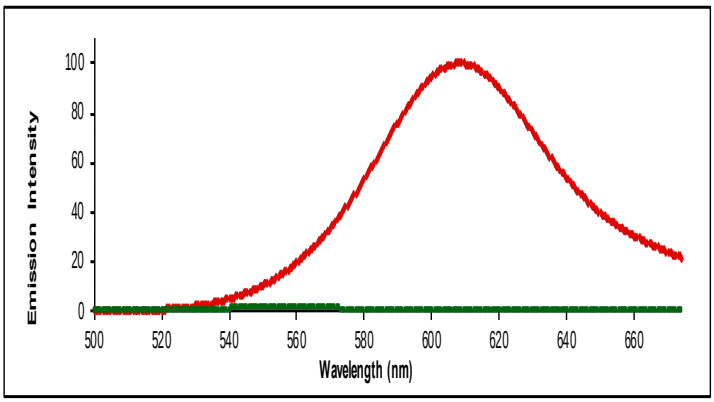
A ready to use lentivirus co-expressing a bright red-emitting luciferase along with a novel monomeric red fluorescent protein mVermilion (2.5 X brighter than mCherry)

Advantage:

A bright red shifted luciferase (thermostable mutant of Luciola Italica) enables better visualization of bioluminescence in deep-seated tissues.

A novel monomeric red fluorescent protein (mVermilion) enables easy selection transduced cell lines by FACS and will also useful in stem cell research to study differentiation and survival of transduced cells *in vitro* and *in vivo*





Advantages of co-expressing Red-emitting firefly luciferase and mVermilion reporters:

- A bright red-emitting mutant of the Italian firefly Luciola Italica with an emission max of 617 nm offers advantage of a bright more stable bioluminescent signal and is great for imaging deep-seated tissues such as liver (see figure.)
- Over 50 cancer cells lines have been stably transduced and tested in vivo and found to have significantly improved brightness (phton flux/sec) compared to cell lines transduced with Luc 2 the green -emitting firefly luciferase
- All LentiGlo products have high titer lentivirus (self-inactivating)

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- All our ready-to use lentiviruses are SIN (self-inactivating) vectors so once the virus integrates into the genome of the transduced cells it gets inactivated so it can no longer replicate.

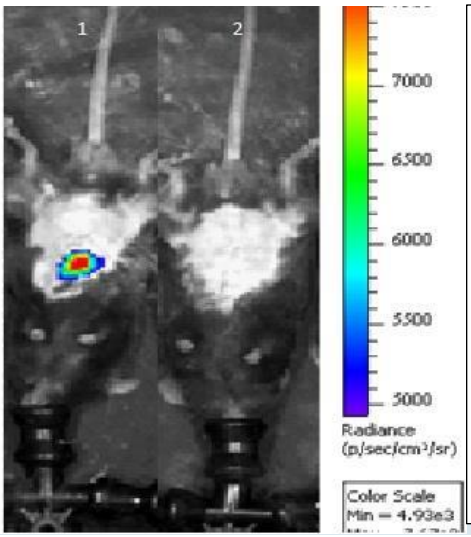
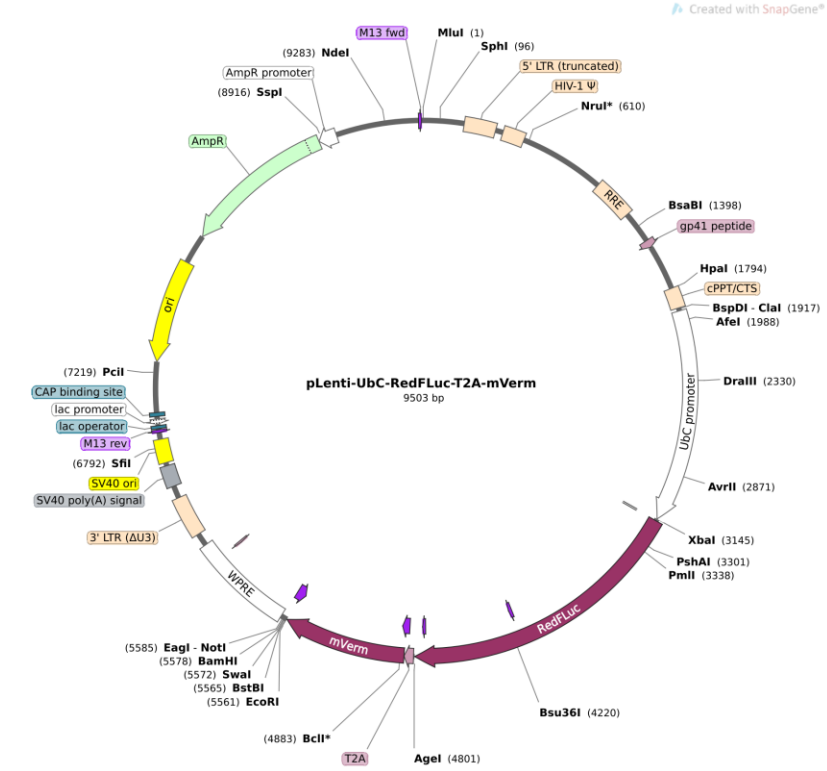


Figure 3: Intrahepatic luciferase luminescence detected by real-time imaging (Xenogen IVIS® Spectrum Bioluminescence). **(1)** Strong luminescence signals are noted on the right upper abdomen of a mouse treated with magnet 14 days post intrahepatic injection of mEP cells labeled with UBC-RedFluc-tdtomato. **(2)** No signal seen in negative control. **Data courtesy of Dr Jeffrey Fair's lab, Cedar Sinai Hospital, Los Angeles, CA.**

Also available as a lentiplasmid , catalog #pLP-62



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LENTIVIRUS TRANSDUCTION PROTOCOLS:

STORAGE: Please store the product frozen at -80 ^{o}C

Cells are normally transduced cells at MOI (multiplicity of infection) of 10-50 depending on cell types. most humantumor cells infect really well at MOI10. polybrene does increase transduction efficiency, but some cells such as primary cells do not like it. you can obtain it from Sigma Chemicals, MO, USA.. We recommend using it at a 10ug/ml concentration (Polybrene is made up in PBS)

-Plate cells in 6-well plate at 70-80% confluency on day 1

-On day 2, remove media and add 1 ml of media containing lentivirus (MOI 10-50 use 20ul, 100 ul of Lentiprep provided) and 10 ug/ml polybrene (optional and not recommended for primary cells)

-On day 3 remove virus, wash cells and re-place with fresh media transfer cells to bigger plate once they are confluent.

-Assay for luciferase acitivty in the supernatant or examine cells for expression of fluorescent protein. Alternately intracellular luciferase acitivyt can be quantitated by lysing cells with the Targeting Systems Cell lysis buffer (catalog 5X CLR-01)

-Use luciferase assay protocol provided with the luciferase assay reagent that is suppied with the LentiGlo kit. Please call tech support 1-866-620-4018 if you need more information or need clarification on the protocol

To place orders or for more information, please call us at 1(888)818-2446 or (619)562 1518 or FAX us at (619)562 1326. You can also contact us via email info@targetingsystems.net

Targeting Systems

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Licensing:: LentiGlo products and lentiplasmid vectors are sold for research purposes only and covered by multiple patents. For information regarding licensing issues please contact technology transfer by email info@targetingsystems.net 1-866-620-4018.

The red-emitting firefly luciferase from the Italian firefly Luciola Italica is covered by issued and pending patents held-licensed by Targeting Systems. Please contact Dr Rampyari Walia at 619 249-2457 or 619 562-1518 regarding licensing

mVermilion is a novel monomeric fluorescent protein licensed licensed form the University of Maryland