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Data Sheet
Revision Date: 21-December-2020

VSV-ΔG-Luciferase Plasmid Expression Vector

Overview:

The plasmid pVSV-ΔG-Luciferase encodes the antigenomic-sense (or positive-sense) RNA of a replicaton-restricted recombinant vesicular stomatitis virus (rVSV) in which the glycoprotein (G) gene has been replaced with firefly luciferase. This plasmid is used together with plasmids encoding the VSV nucleocapsid (N), phosphoprotein (P), glycoprotein (G), and large polymerase subunit (L) to recovery VSV-G pseudotyped ΔG- Luciferase virus as described in [1]. The antigenomic RNA of ΔG-Luciferase is expressed from the bacteriophage T7 promoter in pBS, which has been further modified to contain the hepatitis delta ribozyme used to generate a precise 3' end of the VSV antigenomic RNA and a T7 terminator sequence cloned between the SacII and SacI restriction sites in pBS-SK+ [2, 3].

Recombinant vesicular stomatitis virus-ΔG (rVSV-ΔG) has been used to produce VSV pseudotypes containing the envelope glycoproteins of heterologous viruses including viruses that require high-level containment. Since the infectivity of rVSV-ΔG is restricted to a single round of replication, analyses of viral entry can be performed using just biosafety level 2 (BSL-2) containment.

Product:

Catalog Number	Product	Description
EH1007	pVSV-ΔG-Luciferase Plasmid Expression Vector	10uL (1ug/uL)
EH1008	VSV-ΔG-Luciferase Plasmid Expression Vector System	w/ set of Helper Plasmids (VSV-N, VSV-P, VSV-L, VSV-G)

Specifications:

Product:	Plasmid
Alternative Name:	antigenomic-sense (or positive-sense) RNA of vesicular stomatitis virus (VSV) ΔG-Luciferase
Gene/Insert Name:	ΔG-Luciferase
Insert Size:	11,352 bp
Gene Species:	Vesicular stomatitis virus
Fusion Proteins or Tags:	Luciferase
Vector Backbone:	pBS-SK-ΦT
Vector Size (bp):	3105 bp
Cloning site 5':	N/A (5' VSV sequence joined directly to T7 promoter)
Cloning site 3':	N/A (3' VSV sequence joined directly to HDV ribozyme)
Bacterial Resistance:	Ampicillin or Kanamycin (please see vial label and packing slip)
High or low copy:	High
Grow in E. Coli at 37C	Yes
Comments	For suggested protocol, see: Whitt, MA, J. Virol. Methods, 2010. 169(2): p. 365-74.
Shipped:	Ambient temperature (spotted on filter paper); Cold packs (liquid)

References:

1. Whitt, M.A., Generation of VSV pseudotypes using recombinant DeltaG-VSV for studies on virus entry, identification of entry inhibitors, and immune responses to vaccines. J. Virol. Methods, 2010. 169(2): p. 365-74.
2. Lawson, N.D., et al., Recombinant vesicular stomatitis viruses from DNA. Proc.Natl.Acad.Sci.(USA), 1995. 92(10): p. 4477-4481.

3. Stillman, E.A., J.K. Rose, and M.A. Whitt, Replication and amplification of novel vesicular stomatitis virus minigenomes encoding viral structural proteins. J. Virol., 1995. 69: p. 2946-2953.

It is the responsibility of the principal investigator to seek Institutional Biosafety Safety Committee approval for recombinant DNA, transgenic animal or infectious agent use within their laboratory spaces and maintain an Institutional Biosafety Safety Committee approval during the time period these materials are used.