

### Description

The Nectin-4 Lentiviruses are replication incompetent, HIV-based, VSV-G pseudotyped lentiviral particles that are ready to transduce nearly all types of mammalian cells, including primary and non-dividing cells. The particles contain a human Nectin-4 (NM\_030916.2) driven by an EF1A promoter and a puromycin selection marker (Figure 1).

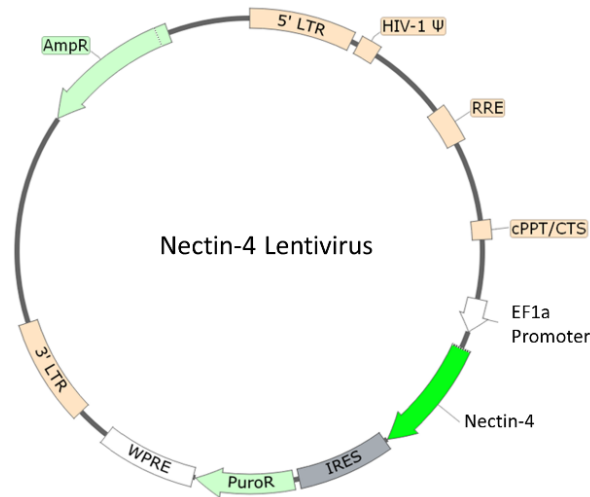


Figure 1: Schematic of the lenti-vector used to generate the Nectin-4 Lentivirus.

### Background

In contrast to other Nectins, which are found extensively in adult tissues, Nectin4 is abundant during fetal development but declines in adult life. However, its expression is elevated specifically in lung, breast, pancreas, and ovarian cancers, and is associated with poor prognosis. Nectin4 modulates the expression of proteins involved in the epithelial–mesenchymal transition via the PI3K/AKT pathway. In addition, Nectin4 ligand for TIGIT in cancer cells. It is considered a promising target for cancer immunotherapy.

### Application(s)

Generate stable cell line expressing human Nectin-4 with puromycin selection

### Formulation

The lentivirus particles were produced from HEK293T cells. They are supplied in cell culture medium containing 90% DMEM + 10% FBS.

### Titer

Two vials (500  $\mu$ l x 2) of lentivirus at a titer  $\geq 10^7$  TU/ml. The titer will vary with each lot; the exact value is provided with each shipment.

### Storage



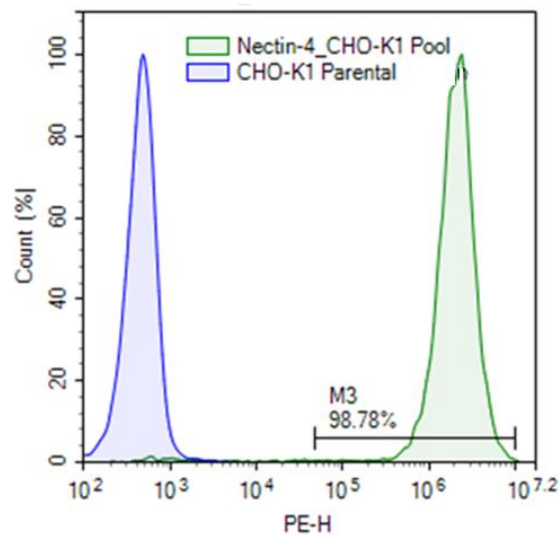
Lentiviruses are shipped with dry ice. For long-term storage, it is recommended to store the lentiviruses at  $-80^{\circ}\text{C}$ . Avoid repeated freeze/thaw cycles. Titers can drop significantly with each freeze/thaw cycle.

**Biosafety**

None of the HIV genes (gag, pol, rev) will be expressed in the transduced cells, as they are expressed from packaging plasmids lacking the packing signal and are not present in the lentivirus particle. Although the pseudotyped lentiviruses are replication-incompetent, they require the use of a Biosafety Level 2 facility. BPS Bioscience recommends following all local federal, state, and institutional regulations and using all appropriate safety precautions.

**Notes**

To generate a Nectin-4 stable cell line, remove the growth medium 48 hours after transduction and replace it with fresh growth medium containing the appropriate amount of puromycin (as pre-determined from a killing curve) for antibiotics selection of transduced cells. Visit: <https://bpsbioscience.com/cell-line-faq> for guidelines on performing a kill curve.

**Figures and Validation Data**

*Figure 2. Transduction of CHO-K1 using Nectin-4 Lentivirus.*

Approximately 50,000 CHO-K1 cells were transduced with 500,000 TU of Nectin-4 lentiviruses. After 66 hours of transduction, the cells were selected with 5 µg/ml of puromycin. The puromycin-resistant cell pool was stained with PE-labeled anti-human Nectin-4 antibody (R&D Systems, #FAB2659P) and analyzed by flow cytometry.

**Sequence**

Human Nectin-4 sequence (accession number: NM\_030916.2)

MPLSLGAEMWGPAAWLLLLLLASFTGRCPAGELETSDDVVTVVLGQDAKLPFCFYRGDSGEQVGVQVAWARVDAGEGAQELALL  
 HSKYGLHVSPAYEGRVEQPPPPRNPLDGSVLLRNAVQADEGEYECRVSTFPAGSFQARLRLRVLPPLPSLNPGPALEEGQGLTLA  
 ASCTAEGSPAPSVTWDETVKGTSSRSFKHSRSAAVTSEFHLVPSRSMNGQPLTCVVSHPGLLQDQRITHILHVSFLAEASVRGLE  
 DQNLWHIGREGAMKCLSEGQPPPSYNWTRLDGPLPSGVRVDGDTLGFPLTTEHSGIYVCHVSNEFSSRDSQVTVDVLDPQE  
 DSGKQVDLVSASVVVVGVIAALLFCLLVVVVVLMSRYHRRKAQQMTQKYEEELTLTRENIRRLHSHHTDPRSQPEESVGLRAEG  
 HPDSLKDNSSCSVMSEEPEGRSYTLTTVREIETQTELLSPGSGRAEEEEEDQDEGIKQAMNHFVQENGLTRAKPTGNGIYINGR  
 HLV

**Troubleshooting Guide**

Visit [bpsbioscience.com/lentivirus-faq](https://bpsbioscience.com/lentivirus-faq) for detailed troubleshooting instructions. For all further questions, please email [support@bpsbioscience.com](mailto:support@bpsbioscience.com).

**Related Products**

<i>Products</i>	<i>Catalog #</i>	<i>Size</i>
Trop2 Lentivirus	78710	500 µl x 2
GPC3 Lentivirus	78711	500 µl x 2
BCMA Lentivirus	78714	500 µl x 2
FcRL5 Lentivirus	78715	500 µl x 2
GPRC5D Lentiviruses	78716	500 µl x 2
Claudin-9 Lentivirus	78721	500 µl x 2
Claudin-3 Lentivirus	78722	500 µl x 2
Claudin-4 Lentivirus	78723	500 µl x 2
LYPD1 Lentivirus	78724	500 µl x 2
PSMA Lentivirus	78726	500 µl x 2