6042 Cornerstone Court W, Ste B
San Diego, CA 92121
Tel: 1.858.202.1401
Fax: 1.858.481.8694
Email: info@bpsbioscience.com

Data Sheet

FcGRIIIA (CD16a) Lentivirus

Catalog #: 79876

Product Description

Fc Gamma Receptor IIIa (FcGRIIIA; FcγRIIIA), also known as CD16a, is a low/intermediate affinity receptor for polyvalent immune-complexed IgG. It is involved in phagocytosis, antibody-dependent cytotoxicity and clearance of immune complexes. The human FcγRIIIa displays a dimorphism in the position of residue 158. One allele (V158) encodes a higher Fc affinity receptor variant with a valine at amino acid residue 158, and the other (F158) encodes a lower Fc affinity receptor variant having a phenylalanine at amino acid residue 158.

The FcGRIIIA Lentivirus are replication incompetent, HIV-based, VSV-G pseudotyped lentiviral particles that are ready to be transduced into almost all types mammalian cells, including primary and non-dividing cells. The particles contain a FcGRIIIA gene (NM_001127593.1; high affinity V158 variant) driven by a CMV promoter (Figure 1).

Application

1. Transient expression of FcGRIIIA in target cells.
2. Generation of stable cell line expressing FcGRIIIA with Geneticin (G418) selection.

Formulation

The lentiviruses were produced from HEK293T cells in the medium containing 90% DMEM + 10% FBS.

Titer

Two vials (500 µl x 2) of lentivirus at a titer ≥5 x 10^6 TU/ml. The titer will vary with each lot; the exact value is provided with each shipment.

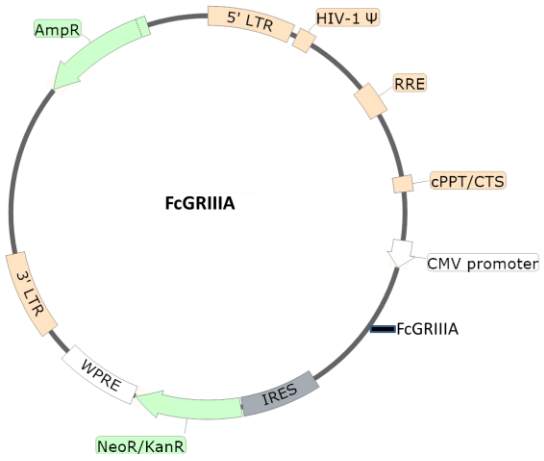

Figure 1. Schematic of the lenti-vector used to generate the FcGRIIIA lentivirus

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Storage
Lentiviruses are shipped with dry ice. For long term storage, it is recommended to store the virus at -80°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. Although the pseudotyped lentiviruses are replication-incompetent, they require the use of a Biosafety Level 2 facility. BPS recommends following all local federal, state, and institutional regulations and using all appropriate safety precautions.

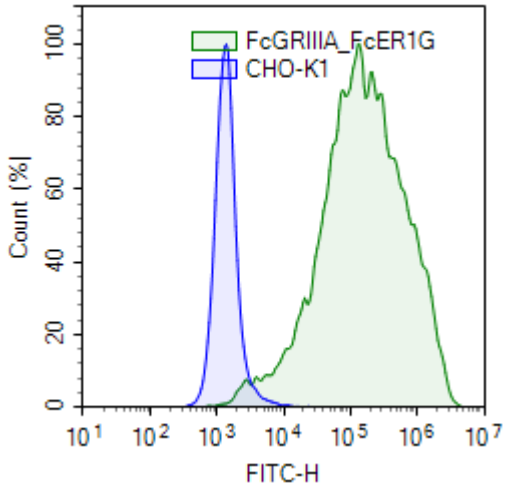

Figure 2. The expression of FcGRIIIA in CHO-K1 cells co-transduced with FcGRIIIA and FcER1G lentiviruses. A. Approximately 500,000 cells/well (6-well culture plate) were co-transduced with 1,000,000 TU/well FcGRIIIA and 1,000,000 TU/well FcER1G lentivirus (BPS#79878) in the presence of 5 µg/mL of polybrene. After 52 hours of transduction, the cells were switched into Growth Medium 3G (BPS Bioscience #79882) which contains 1000 µg/ml Geneticin (for FcGRIIIA) and 5 µg/ml Puromycin (for FcER1G) for one week, and the antibiotics-resistant cell pool were analyzed by FACS using FITC-labeled anti-FcGRIIIA (BD Bioscience, #555406). Blue, CHO-K1 parental cells; Green, CHO-K1 cells transduced with FcGRIIIA and FcER1G lentivirus. Note: the expression of accessory protein FcER1G is required for the cell surface expression of FcGRIIIA. No surface expression of FcGRIIIA is detected by FACS in CHO cells transduced with FcGRIIIA lentivirus alone (data not shown).

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Related Products

Product	Cat. #	Size
NFκB Luciferase Reporter Lentivirus	79564	500 µl x2
CRE Luciferase Reporter Lentivirus	79580	500 µl x2
NFAT Luciferase Reporter Lentivirus	79579	500 µl x2
STAT3 Luciferase Reporter Lentivirus	79744	500 µl x2
STAT5 Luciferase Reporter Lentivirus	79745	500 µl x2
TCF/LEF Luciferase Reporter Lentivirus	79787	500 µl x2
ISRE Luciferase Reporter Lentivirus	79824	500 µl x2
IL-2 Promoter Luciferase Reporter Lentivirus	79825	500 µl x2
IL-8 Promoter Luciferase Reporter Lentivirus	79827	500 µl x2
AP-1 Luciferase Reporter Lentivirus	79823	500 µl x2
SBE Luciferase Reporter Lentivirus	79806	500 µl x2
TEAD Luciferase Reporter Lentivirus	79833	500 µl x2
ARE Luciferase Reporter Lentivirus	79869	500 µl x2
Negative Control Lentivirus	79578	500 µl x2
Renilla Luciferase (Rluc) Lentivirus	79565	500 µl x2
Firefly Luciferase (Fluc) Lentivirus (G418)	79692-G	500 µl x2
Firefly Luciferase (Fluc) Lentivirus (Hygromycin)	79692-H	500 µl x2
Firefly Luciferase (Fluc) Lentivirus (Puromycin)	79692-P	500 µl x2
FcGRIIB Lentivirus	79877	500 µl x2
FcER1G Lentivirus	79878	500 µl x2