

SAFETY DATA SHEET

Relevant Products

- #C1100G mNeon Green tagged ACE2 (CMV)
- #C1100R Red tagged ACE2 (CMV)
- #C1100N Unlabeled ACE2 (CMV)

Materials Included

- Fluorescence-tagged ACE2 BacMam vector: $\sim 2 \times 10^{10}$ VG/mL in ESF 921 Insect Cell Culture Medium (Expression Systems #96-001-01).
Fluorescent ACE2 binds to spike protein on pseudo SARS-CoV-2 to mediate viral entry. (Depending on the product number, the BacMam is either green fluorescent tagged, red fluorescent tagged, or unlabeled)
- Fluorescent FP BacMam vector: $\sim 2 \times 10^{10}$ VG/mL in ESF 921 Insect Cell Culture Medium (Expression Systems #96-001-01).
For use in control cells not transduced with ACE2 in order to match viral load.
- Sodium Butyrate (Sigma Aldrich product # B5887) 500 mM in H₂O.
Add Sodium Butyrate to the culture to maintain BacMam expression. Other HDAC inhibitors may work as well or even better in certain cell types.

Storage

BacMam vectors and HDAC Inhibitors should be stored at 4°C and protected from light in the original package. Avoid repeated freeze/thaw cycles. We recommend retesting BacMam stock after storing for more than 12 months at 4°C, or after any freeze-thaw cycle.

QA/QC

BacMam stocks are tested for sterility. Samples are added to rich cell culture media without antibiotic and incubated at 37°C, 5% CO₂, and checked for bacterial or fungal growth after 5 days. Viral genes (VG) per milliliter (mL) are measured by qPCR with primers specific to VSVG. Check tube label for exact titer. Viral genomic DNA at multiple dilutions are run in qPCR against a standard curve to generate an average titer for each BacMam stock. Each tube of stock is labeled with VG/mL and a stock keeping unit (SKU) identifier. To test efficacy, serial dilutions are added to cultured HEK 293 cells. After 24 hours, fluorescent cells are counted to establish transducing units per mL of stock.

Biosafety

BacMam is the modified baculovirus, *Autographa californica*, AcMNPV. Baculovirus is pseudotyped to infect mammalian cells, but it does not replicate and its genome is silent in mammalian cells. While it should be handled carefully, in a sterile environment, it is classified as a BSL-1 reagent.

For Research Use Only. Not recommended for use or sale in human or animal diagnostic or therapeutic products. This product contains no substances which at their given concentration are considered to be hazardous to health, however we recommend handling with care. Wear impervious gloves and eye protection when handling. Do not ingest.

Review the protocols on Montana Molecular's Website: www.montanamolecular.com before using these products.

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Relevant Products

#C1110G Pseudo SARS-CoV-2 Green Reporter	#C1110R Pseudo SARS-CoV-2 Red Reporter
#C1120G Pseudo SARS-CoV-2 D614G Green Reporter	#C1120R Pseudo SARS-CoV-2 D614G Red Reporter
#C1121G Pseudo SARS-CoV-2 Spike M1 Green Reporter	#C1121R Pseudo SARS-CoV-2 Spike M1 Red Reporter.
#C1122G Pseudo SARS-CoV-2 Spike M2 Green Reporter	#C1122R Pseudo SARS-CoV-2 Spike M2 Red Reporter
#C1123G Pseudo SARS-CoV-2 Spike Delta Variant Green Reporter	

Materials Included

- Pseudo SARS-CoV-2 vector: ~2x10¹⁰ VG/mL in ESF 921 Insect Cell Culture Medium (Expression Systems #96-001-01).

Modified baculovirus pseudotyped with the SARS-CoV-2 Spike protein, the D614G mutation, D614G/E484K/N501Y/K417T mutations, D614G/E484K/N501Y/K417N mutations, or the Delta Variant (B.1.617.2) Spike protein. Depending on the kit, green or red fluorescence is targeted to the host cell nuclei.

- Sodium Butyrate (Sigma Aldrich product # B5887) 500 mM in H₂O.

Add Sodium Butyrate to the culture to maintain reporter expression. Other HDAC inhibitors may work as well or even better in certain cell types.

Storage

Pseudo SARS-CoV-2 vectors and HDAC Inhibitors should be stored at 4°C and protected from light in the original package. Avoid repeated freeze/thaw cycles. We recommend retesting stocks after storing for more than 12 months at 4°C, or after any freeze-thaw cycle.

QA/QC

Stocks are tested for sterility. Samples are added to rich cell culture media without antibiotic and incubated at 37°C, 5% CO₂, and checked for bacterial or fungal growth after 5 days. Viral genes (VG) per milliliter (mL) are measured by qPCR with primers specific to SARS-CoV-2 Spike. Check tube label for exact titer. Viral genomic DNA at multiple dilutions are run in qPCR against a standard curve to generate an average titer for each stock. Each tube is labeled with VG/mL and a stock keeping unit (SKU) identifier. To test efficacy, serial dilutions are added to cultured HEK 293 cells. After 24 hours, fluorescent cells are counted to establish transducing units per mL of stock.

Biosafety

Pseudo SARS-CoV-2 is a modified baculovirus, *Autographa californica*, AcMNPV. The pseudo SARS-CoV-2 is pseudotyped with Spike protein to enter mammalian cells carrying ACE2 and TMPRSS2, but it does not replicate and its genome is silent in mammalian cells. While it should be handled carefully, in a sterile environment, Pseudo SARS-CoV-2 is classified as a BSL-1 reagent.

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Relevant Products

#C1130N Tmprss2 (CMV)

Materials Included

- Tmprss2 in BacMam vector: $\sim 2 \times 10^{10}$ VG/mL in TNM-FH Insect Culture Medium ESF 921 Insect Cell Culture Medium (Expression Systems #96-001-01).
- Sodium Butyrate (Sigma Aldrich product # B5887) 500 mM in H₂O.

Add Sodium Butyrate to the culture to maintain BacMam expression. Other HDAC inhibitors may work as well or even better in certain cell types.

Storage

BacMam vectors and HDAC Inhibitors should be stored at 4°C and protected from light in the original package. Avoid repeated freeze/thaw cycles. We recommend retesting BacMam stock after storing for more than 12 months at 4°C, or after any freeze-thaw cycle.

QA/QC

BacMam stocks are tested for sterility. Samples are added to rich cell culture media without antibiotic and incubated at 37°C, 5% CO₂, and checked for bacterial or fungal growth after 5 days. Viral genes (VG) per milliliter (mL) are measured by qPCR with primers specific to VSVG. Check tube label for exact titer. Viral genomic DNA at multiple dilutions are run in qPCR against a standard curve to generate an average titer for each BacMam stock. Each tube of stock is labeled with VG/mL and a stock keeping unit (SKU) identifier.

Biosafety

BacMam is the modified baculovirus, *Autographa californica*, AcMNPV. Baculovirus is pseudotyped to infect mammalian cells, but it does not replicate and its genome is silent in mammalian cells. While it should be handled carefully, in a sterile environment, it is classified as a BSL-1 reagent.

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Relevant Products

#C1140R Neuropilin-1 Red (CMV)

#C1140N Neuropilin-1 Unlabeled (CMV)

Materials Included

- Neuropilin-1 in BacMam vector: $\sim 2 \times 10^{10}$ VG/mL in TNM-FH Insect Culture Medium ESF 921 Insect Cell Culture Medium (Expression Systems #96-001-01).

BacMam stock is either red fluorescence-tagged or unlabeled, depending on the product number.

- Sodium Butyrate (Sigma Aldrich product # B5887) 500 mM in H₂O.

Add Sodium Butyrate to the culture to maintain BacMam expression. Other HDAC inhibitors may work as well or even better in certain cell types.

Storage

BacMam vectors and HDAC Inhibitors should be stored at 4°C and protected from light in the original package. Avoid repeated freeze/thaw cycles. We recommend retesting BacMam stock after storing for more than 12 months at 4°C, or after any freeze-thaw cycle.

QA/QC

BacMam stocks are tested for sterility. Samples are added to rich cell culture media without antibiotic and incubated at 37°C, 5% CO₂, and checked for bacterial or fungal growth after 5 days. Viral genes (VG) per milliliter (mL) are measured by qPCR with primers specific to VSVG. Check tube label for exact titer. Viral genomic DNA at multiple dilutions are run in qPCR against a standard curve to generate an average titer for each BacMam stock. Each tube of stock is labeled with VG/mL and a stock keeping unit (SKU) identifier.

Biosafety

BacMam is the modified baculovirus, *Autographa californica*, AcMNPV. Baculovirus is pseudotyped to infect mammalian cells, but it does not replicate and its genome is silent in mammalian cells. While it should be handled carefully, in a sterile environment, it is classified as a BSL-1 reagent.

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Relevant Products

#C1150N Cathepsin-L (CMV)

Materials Included

- Cathepsin-L in BacMam vector: $\sim 2 \times 10^{10}$ VG/mL in TNM-FH Insect Culture Medium ESF 921 Insect Cell Culture Medium (Expression Systems #96-001-01).
- Sodium Butyrate (Sigma Aldrich product # B5887) 500 mM in H₂O.

Add Sodium Butyrate to the culture to maintain BacMam expression. Other HDAC inhibitors may work as well or even better in certain cell types.

Storage

BacMam vectors and HDAC Inhibitors should be stored at 4°C and protected from light in the original package. Avoid repeated freeze/thaw cycles. We recommend retesting BacMam stock after storing for more than 12 months at 4°C, or after any freeze-thaw cycle.

QA/QC

BacMam stocks are tested for sterility. Samples are added to rich cell culture media without antibiotic and incubated at 37°C, 5% CO₂, and checked for bacterial or fungal growth after 5 days. Viral genes (VG) per milliliter (mL) are measured by qPCR with primers specific to VSVG. Check tube label for exact titer. Viral genomic DNA at multiple dilutions are run in qPCR against a standard curve to generate an average titer for each BacMam stock. Each tube of stock is labeled with VG/mL and a stock keeping unit (SKU) identifier.

Biosafety

BacMam is the modified baculovirus, *Autographa californica*, AcMNPV. Baculovirus is pseudotyped to infect mammalian cells, but it does not replicate and its genome is silent in mammalian cells. While it should be handled carefully, in a sterile environment, it is classified as a BSL-1 reagent.

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Relevant Products

#C1160G 3CLglow Assay
#C1161G 3CLglowUp Assay
#C1162G 3CLglowLive Assay

Materials Included

- 3CLpro Biosensor BacMam: ~ 2×10^{10} VG/mL in ESF 921 Insect Cell Culture Medium (Expression Systems #96-001-01).
- 3CLpro enzyme in BacMam: ~ 2×10^{10} VG/mL in ESF 921 Insect Cell Culture Medium (Expression Systems #96-001-01).
- Sodium Butyrate (Sigma Aldrich product # B5887) 500 mM in H₂O.

Add Sodium Butyrate to the culture to maintain reporter expression. Other HDAC inhibitors may work as well or even better in certain cell types.

Storage

BacMam vectors and HDAC Inhibitors should be stored at 4°C and protected from light in the original package. Avoid repeated freeze/thaw cycles. We recommend retesting stocks after storing for more than 12 months at 4°C, or after any freeze-thaw cycle.

QA/QC

BacMam stocks are tested for sterility before packaging. Samples are added to rich cell culture media without antibiotic and incubated at 37°C, 5% CO₂, and checked for bacterial or fungal growth after 5 days. Viral genes (VG) per milliliter (mL) are measured by qPCR with primers specific to VSVG. Check tube label for exact titer value. Viral genomic DNA at multiple dilutions are run in qPCR against a standard curve to generate an average titer for each BacMam stock. Each tube of stock is labeled with VG/mL and a stock keeping unit (SKU) identifier. To test efficacy, serial dilutions are added to cultured HEK 293 cells. After 24 hours, fluorescent cells are counted to establish transducing units per mL of stock.

Biosafety

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C1160G & C1162G: Patent Pending, US 63/077,096