Recombinant Murine Coronavirus MHV-A59-MHV2Spike with Enhanced Green Fluorescent Protein (eGFP)

Catalog No. NR-53717

For research use only. Not for use in humans.

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Manufacturer:
BEI Resources

Product Description:

Virus Classification: Coronaviridae, Betacoronavirus
Species: Murine coronavirus [formerly murine hepatitis virus (MHV)]
Isolate: MHV-A59-MHV2Spike-eGFP
Original Source: MHV, isolate MHV-A59-MHV2Spike-eGFP is a recombinant MHV-A59 virus with spike genes from strain MHV-2 in which open reading frame 4 (ORF4) was replaced by a gene encoding the enhanced green fluorescent protein (eGFP).1,2
Comments: Targeted recombination and selection was used to construct MHV, isolate MHV-A59-MHV2Spike-eGFP. Spike genes in MHV, isolate MHV-A59-MHV2Spike-eGFP are derived by switching mildly virulent strain A59 spike genes with spike genes from highly neurovirulent strain MHV-2. All other genes in the virus genome are derived from strain MHV-A59. The eGFP gene was inserted into the virus genome in place of the nonessential gene ORF4.2 eGFP is a modified version of GFP gene designed for brighter fluorescence, in which the codon utilization has been maximized for translation in eukaryotic cells.3,4 Expression of eGFP is stable over multiple passages in vitro and at a level high enough to be readily detected in cultured cells and in the central nervous system of infected animals.2

Material Provided:
Each vial contains approximately 1.0 mL of cell lysate and supernatant from murine 17Cl-1 cells infected with MHV, isolate MHV-A59-MHV2Spike-eGFP.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:
NR-53717 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:
Host: Murine 17Cl-1 cells (BEI Resources NR-53719)

Growth Medium: Dulbecco’s Modified Eagle’s Medium (DMEM) modified to contain 4 mM L-glutamine, 4500 mg per L glucose, 1 mM sodium pyruvate, and 1500 mg per L sodium bicarbonate supplemented with 2% fetal bovine serum or equivalent

Infection: Cells should be 70% to 80% confluent

Incubation: 2 to 4 days at 37°C and 5% CO2

Cytopathic Effect: Cell rounding and sloughing

Citation:
Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Recombinant Murine Coronavirus MHV-A59-MHV2Spike with Enhanced Green Fluorescent Protein (eGFP), NR-53717.”

Biosafety Level: 2


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References:

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