Lentivirus & VSV Pseudotyped with Coronavirus Spike (S) Protein

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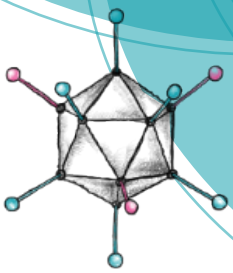
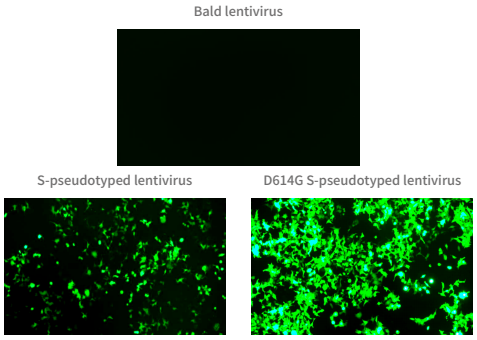


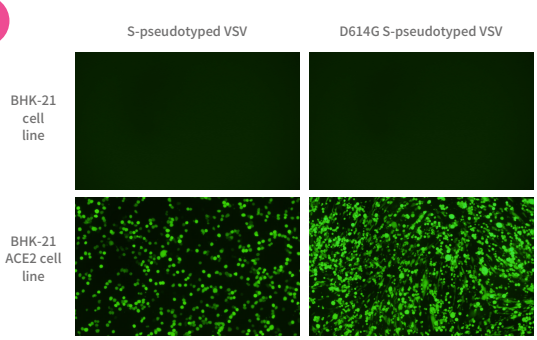
- Ideal for studying mechanisms of coronavirus cell entry and evolution of viral tropism over time.
- Can be safely handled in any regular BSL2 facility.
- Highly optimized pseudotyping protocols for achieving high transduction efficiency.
- Lentivirus (**A**) and VSV (**B**) pseudotyped with SARS-CoV-2 S protein or its D614G variant.

A



293T cells overexpressing human ACE2 receptor transduced with bald lentivirus, lentivirus pseudotyped with S protein or its variant.

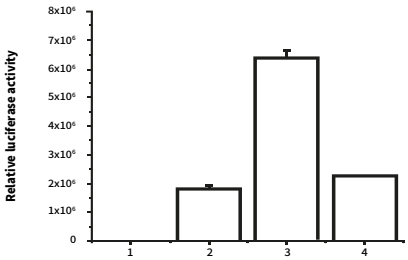
B



VSV pseudotyped with SARS-CoV-2 S protein and its D614G variant specifically infected BHK-21 cells overexpressing human ACE2 receptor.

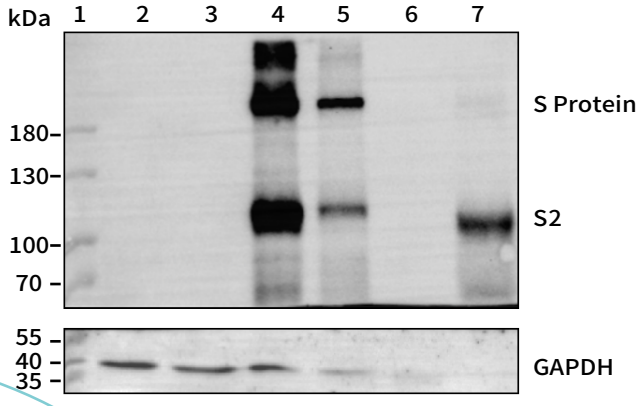
- Pseudotyping available for S proteins derived from other coronavirus species.
- Options to customize pseudotyped virus to express reporters such as EGFP (**A & B**) or luciferase (**C**) for easy viral entry analysis.
- Bald lentivirus or VSV lacking viral envelop protein available for being used as negative control.
- ACE2-expressing cell lines optimized for transduction with SARS-CoV-2 S protein or VSV-G pseudotyped virus available (**C**).

C



Luciferase assay in 293T(hACE2) cells transduced with lentivirus pseudotyped by different proteins; 1: Untransduced cells. 2: SARS-CoV-2 S protein. 3: SARS-CoV-2 D614G S protein. 4: VSV-G Protein.

D



Western blot analysis using an antibody against the S2 domain of the SARS-CoV-2 S protein revealed the presence of both the full-length and the cleaved S2 portion of S in packaging cells and in pseudotyped virus.
Lane 1: marker;
Lane 2: Untransduced 293T cells;
Lane 3: 293T cells transfected with VSV-G pseudotyping lentivirus packag-ing plasmids;
Lane 4: 293T cells transfected with S protein helper plasmid alone;
Lane 5: 293T cells transfected with S pseudotyping lentivirus packaging plasmids;
Lane 6: VSV-G pseudotyped lentiviral particles;
Lane 7: S pseudotyped lentiviral particles;

Note: S protein naturally undergoes cleavage to facilitate viral entry into infected cells.

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