

#### DESCRIPTION

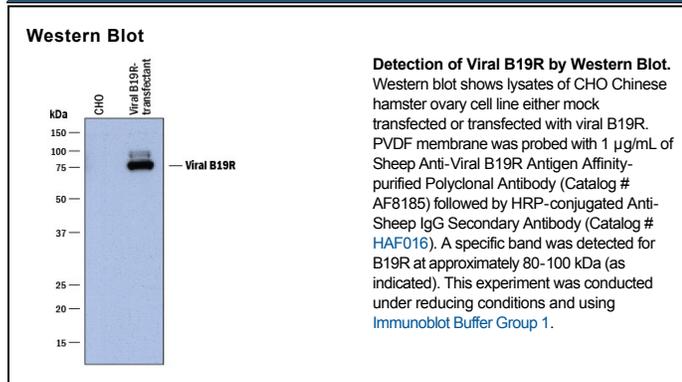
|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Viral   |
| <b>Specificity</b>        | Detects viral B19R in direct ELISAs and Western blots.  |
| <b>Source</b>             | Polyclonal Sheep IgG  |
| <b>Purification</b>       | Antigen Affinity-purified   |
| <b>Immunogen</b>          | Human embryonic kidney cell line HEK293-derived recombinant viral B19R His20-Glu351<br>Accession # P25213   |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

|                     | <b>Recommended Concentration</b> | <b>Sample</b> |
|---------------------|----------------------------------|---------------|
| <b>Western Blot</b> | 1 µg/mL                          | See Below     |

#### DATA



#### PREPARATION AND STORAGE

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Reconstitute at 0.2 mg/mL in sterile PBS.  |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C   |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

#### BACKGROUND

B19R is a 60-65 kDa protein encoded by the Vaccinia virus genome and by the genomes of other orthopoxviruses. Its function represents one of several mechanisms used by these viruses to evade the host immune response. It is known as B19R in the Copenhagen strain of Vaccinia and as B18R in the Western Reserve (WR) strain. There is a structurally-unrelated, larger Vaccinia protein that is also known as B18R that contains multiple ankyrin-like repeats. B19R, however, contains three immunoglobulin-like domains and shows homology to human, mouse, and bovine type I interferon receptors. The Wyeth strain of Vaccinia virus encodes a truncated protein that lacks the C-terminal Ig-like domain, and the Lister strain of Vaccinia produces an inactive B19R. B19R functions as a decoy binding protein for type I interferons (IFN alpha, beta, omega). It binds to type I interferons from multiple species and prevents IFN signaling through its receptors. B19R binds to the surface of virus infected and uninfected cells where it retains its capacity to bind and neutralize IFN. It shields those cells from the antiviral effects of type I interferons, thereby enabling virus replication and pathogenicity. B19R also limits the effectiveness of IFN alpha produced following TLR activation, and it limits adaptive T cell responses.