Table 1 VIrologıcal, Pathophysıologıcal And Vaccıne Features Of Smallpox, Measles And Sars-Cov-2 Vıruses

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| **Virus** | **Genotypes** | **Cell entry receptor/cells** | **Pathophysiology** | **Vaccine type** |
| Smallpox  (**DNA virus**) | **Variola majör,minor** | Entry-fusion complexa | * Respiratory epithelium * primary viremia (?) * Macrophages * **Regional lymph node amplification** * **Secondary viremia** * bacterial superinfections | ***Live virus*** |
| Measle  (**single-stranded,** [**negative-sense**](https://en.wikipedia.org/wiki/Sense_(molecular_biology)#RNA_sense_in_viruses), [**enveloped**](https://en.wikipedia.org/wiki/Viral_envelope)[**RNA**](https://en.wikipedia.org/wiki/RNA_virus)) | 8 [clades](https://en.wikipedia.org/wiki/Clades) of measles (A–H)  **There is only one measles serotype** | CD46b  SLAMF1c  Nectin-4d | * Respiratory epithelium * MHC class II + CD11c + dendritic cells * **Regional lymph node amplification** * **Secondary viremia** * Bacterial superinfections | ***Live virus*** |
| SARS-COV-2  (**Positive-sense single-stranded RNA**) | Seven main strains: O, L, S, V, G, GR, and GH  23 subtypes  New mutant variants | ACE-2 receptor | * Respiratory epithelium * Pulmonary II pneumocytes * Diffuse alveolar damage * **Viremia ?** * Bacterial superinfections | İnactive virus,  mRNA,  DNA,  Vector intermediate |

a Four proteins are involved in attachment to glycosaminoglycans and laminin and a complex of eleven proteins that are conserved in all poxviruses mediates the hemifusion and entry steps.

b CD46 is a regulator that normally prevents cells from complement-mediated self-destruction, and is found on the surface of all human cells, with the exception of erythrocytes