

HIV/SIV PROTEINS

| Name | Size | Function | Localization |
|----------------------------|---------------|--|--|
| Gag MA | p17 | membrane anchoring; env interaction; nuclear transport of viral core. (myristylated protein) | virion |
| CA | p24 | core capsid | virion |
| NC | p7 | nucleocapsid, binds RNA | virion |
| | p6 | binds Vpr | virion |
| Protease (PR) | p15 | gag/pol cleavage and maturation | virion |
| Reverse Transcriptase (RT) | p66, p51 | reverse transcription | virion |
| RNase H | (heterodimer) | RNase H activity | virion |
| Integrase (IN) | | DNA provirus integration | virion |
| Env | gp120/gp41 | external viral glycoproteins bind to CD4 and chemokine co-receptors | plasma membrane, virion envelope |
| Tat | p16/p14 | viral transcriptional transactivator | primarily in nucleolus/nucleus |
| Rev | p19 | RNA transport, stability and utilization factor (phosphoprotein) | primarily in nucleolus/nucleus shuttling between nucleolus and cytoplasm |
| Vif | p23 | promotes virion maturation and infectivity | cytoplasm (cytosol, membranes) virion |
| Vpr | p10-15 | promotes nuclear localization of preintegration complex, inhibits cell division, arrests infected cells at G2/M | virion nucleus (nuclear membrane?) |
| Vpu | p16 | promotes extracellular release of viral particles; degrades CD4 in the ER; (phosphoprotein only in HIV-1 and SIVcpz) | integral membrane protein |
| Nef | p27-p25 | CD4 and class I downregulation (myristylated protein) | plasma membrane, cytoplasm, (virion?) |
| Vpx | p12-16 | Vpr homolog present in HIV-2 and some SIVs absent in HIV-1 | virion (nucleus?) |
| Tev | p28 | tripartite tat-env-rev protein (also named Tnv) | primary in nucleolus/nucleus |