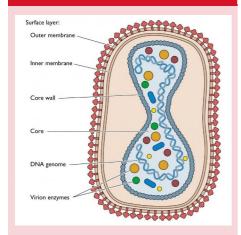


Poxvirus Structure, Genome and Replication Cheat Sheet

by Chanusai2215 via cheatography.com/140891/cs/30095/

Structure



proteins with enzymatic activities

Redox active proteins E10, A2.5, and G4
Phosphorylation Kinase- F10 & B1
Dephosphorylation Phosphotase - H1
Proteolytic processing proteinase - I7

Replication steps

Attachment

Entry

Early gene transcription

Replication

Intermediate gene transcription

late gene transcription

Assembly

Release

Structure

wall

Complex

Spherical Shaped

Enveloped One lipid membrane virus Outer Corrugated due to protrusions layer Dumbbell shaped Internal Core Lateral Two present in the concavities bodies between outer layer and Core Outer core Palisade structure with T wall shaped spike proteins Inner Core Smooth

Genome Organisation

Genome

Terminal Has ITRs with secondary
Regions hairpin loop structures that
connect two DNA strands and
contains the variable genes that
are responsible for host cell
interactions

Central Conserved genes responsible
Regions for replication and morpho-

Proteins For Replication

Early Inducing proliferation of neighb-Gene ouring cells

Proteins

Counteracting host immune defences

Some proteins can induce a second uncoating reaction thereby releasing the viral genome from the core

Mediating replication of the

genome

Protiens Viral DNA polymerase

ln

Replic-

ation

Helicase-primase

Uracil DNA glycosylase

Single-stranded DNA-binding

protein

DNA ligase

Holliday junction resolvase

Proteins RNA polymerase

In Tr

Transcription

ETF

Capping enzyme

VITF-3

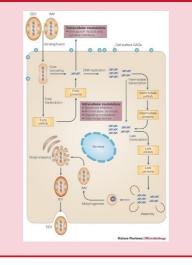
Proteins for Attachment and Entry

Attachment A17, A25, A26, A27, D8, H3

Entry Entry A16, A21, A28, F9, G3, Fusion G9, H2, I2, J5, L1, L5, O3

Replication Cycle

genesis



By Chanusai2215

Published 6th December, 2021. Last updated 6th December, 2021. Page 1 of 2. Sponsored by Readable.com Measure your website readability! https://readable.com

cheatography.com/chanusai2215/



Poxvirus Structure, Genome and Replication Cheat Sheet by Chanusai2215 via cheatography.com/140891/cs/30095/

Proteins For Replication (cont)

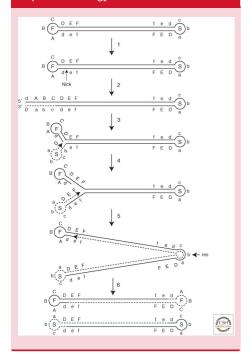
VLTF-1, VLTF-2, VLTF-3, VLTF4

Release factor Elongation factor

Poly(A) polymerase

DNA topoisomerase

Repliation strategy



Pathogenesis (cont)

After this, a second viremic period ensues, followed by seeding of distant sites, specially the skin, and generation of the characteristic generalized rash.

An eruption begins, with lesions forming macules, papules, vesicles, pustules, and crusts to scar formation from days 6 to 23 of the infection.

Pathogenesis

Entry through skin

Entry through respiratory tract

Replication in

Malpighian layer of alveolar macropepidermis, fibroblasts and small bronchioles

Entry into lymphatic system

Entry into systemic circulation

The virus moves from the regional lymphatics to the bloodstream to cause primary viremia.

And then multiplies in the spleen, liver, bone marrow, and other reticuloendothelial organs.



By Chanusai2215

Published 6th December, 2021. Last updated 6th December, 2021. Page 2 of 2. Sponsored by **Readable.com**Measure your website readability!
https://readable.com