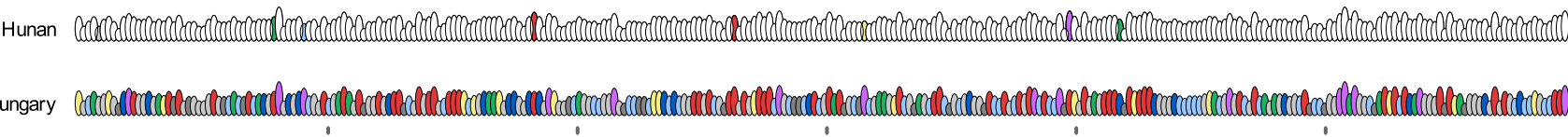


Differences in Amino Acid composition of two isolates of Potato Virus A

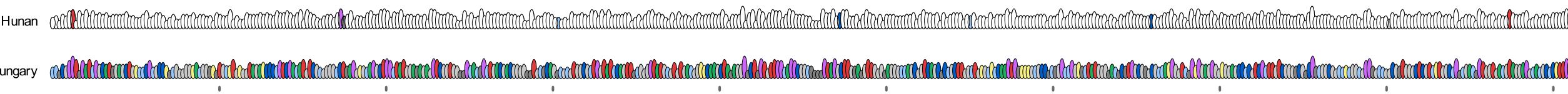
Hunan - the most recent sequence supplied to Genbank. Hunan Agricultural University, China

Hungary - type isolate for this virus. University of Helsinki, Finland

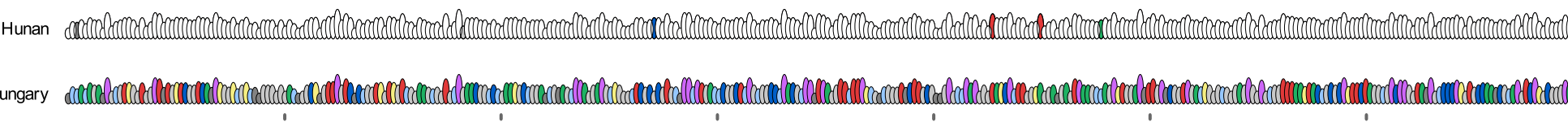
P1 Proteinase 1 Role in amplification enhancement and virus movement. Hypothesised role in symptomatology.



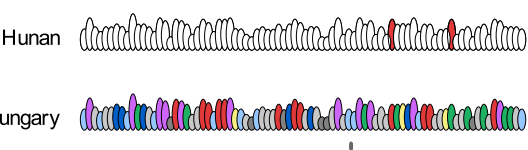
HC Pro Helper Component Proteinase Principle determinant of symptoms. Roles in long-distance movement, post-transcriptional gene silencing suppression, polyprotein processing, accumulation and aphid transmission.



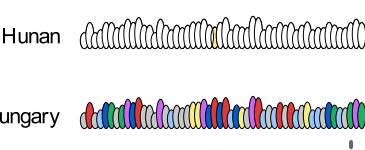
P3 Proteinase 3 Pathogenicity. Hypothesised role in replication and amplification.



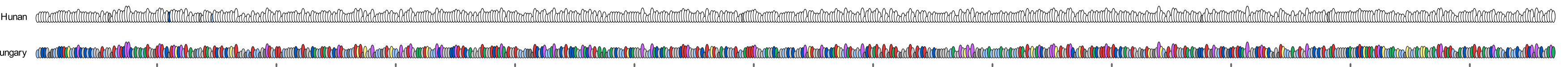
PIPO Pretty Interesting Potyviridae Open Reading Frame Produced by a +2 frameshift in P3. Product then fuses with the N-terminus of P3 to create P3N-PIPO. Essential for intracellular movement.



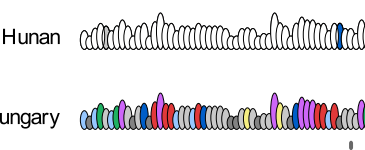
6K1 6K1 Hypothesised role in pathogenicity.



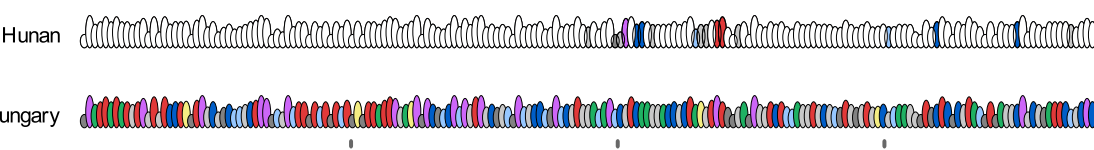
CI Cylindrical Inclusion RNA helicase which forms inclusion bodies in cell cytoplasm. Hypothesised role in intracellular movement.



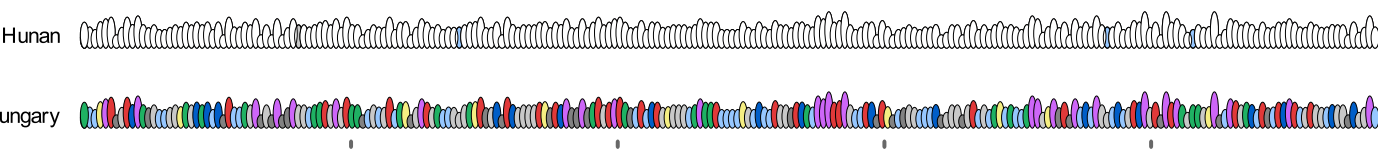
6K2 6K2 Anchors replication complex to plant cell.



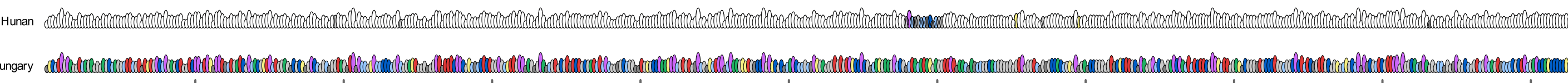
Nla-VPg Nuclear Inclusion a-Viral genome-linked Long distance movement. Roles in replication and host genotype specificity.



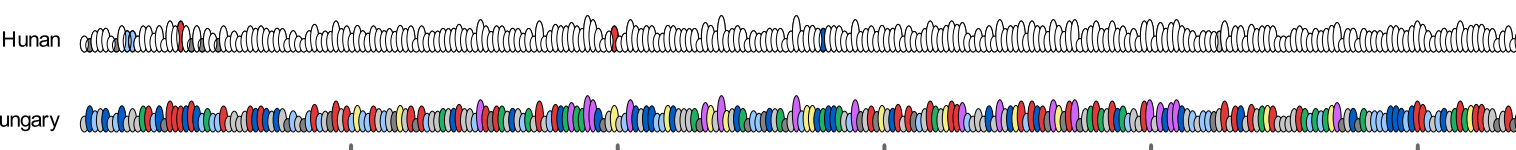
Nla-Pro Nuclear Inclusion a-Proteinase Major proteinase responsible for the efficient and highly regulated cleaving of polyprotein.



NlB Nuclear Inclusion b RNA dependent RNA polymerase. Responsible for protein movement to the nucleus. Role in genome replication.



CP Coat Protein Protective coat of RNA. Responsible for assembly. Contains the virus-specific epitopes and is crucial for aphid transmission.



Key

50

Acidic (-)

Aspartic Acid
Glutamic Acid

Aliphatic

Alanine
Glycine
Isoleucine
Leucine
Proline
Valine

Amide

Asparagine
Glutamine

Aromatic

Phenylalanine
Tryptophan
Tyrosine

Basic (+)

Arginine
Histidine
Lysine

Hydroxyl

Serine
Threonine

Sulphur

Cysteine
Methionine

Created in Nodebox by Sam Edwards and Tim Holmes