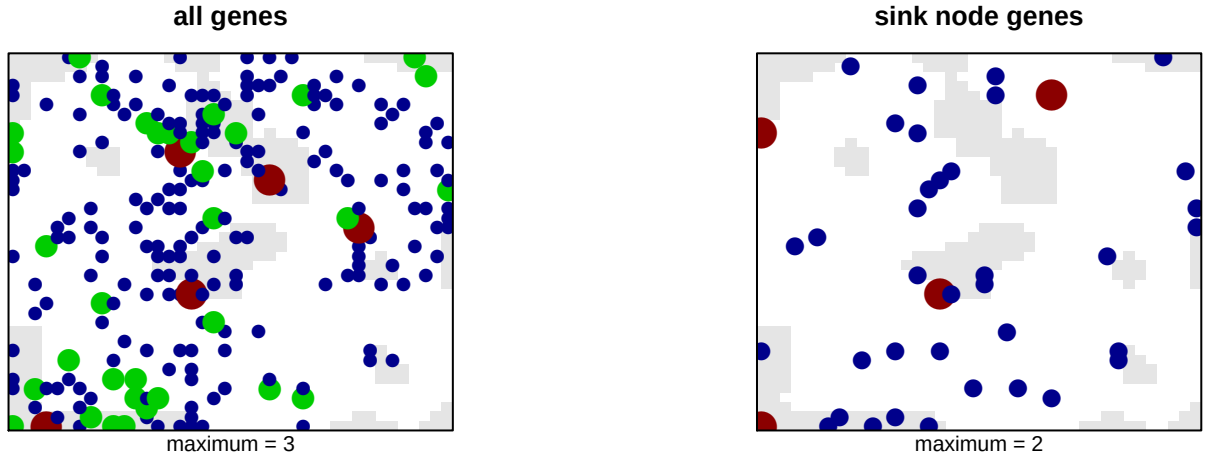
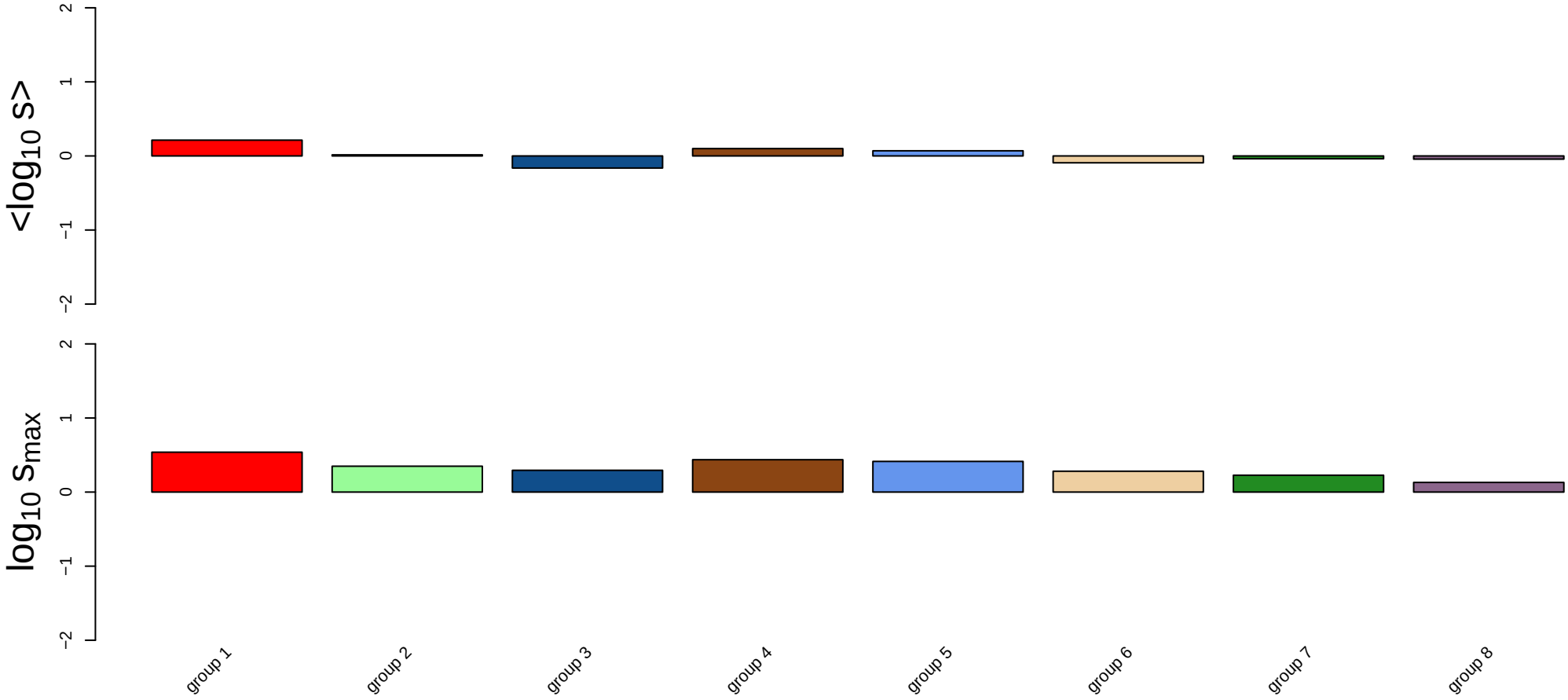
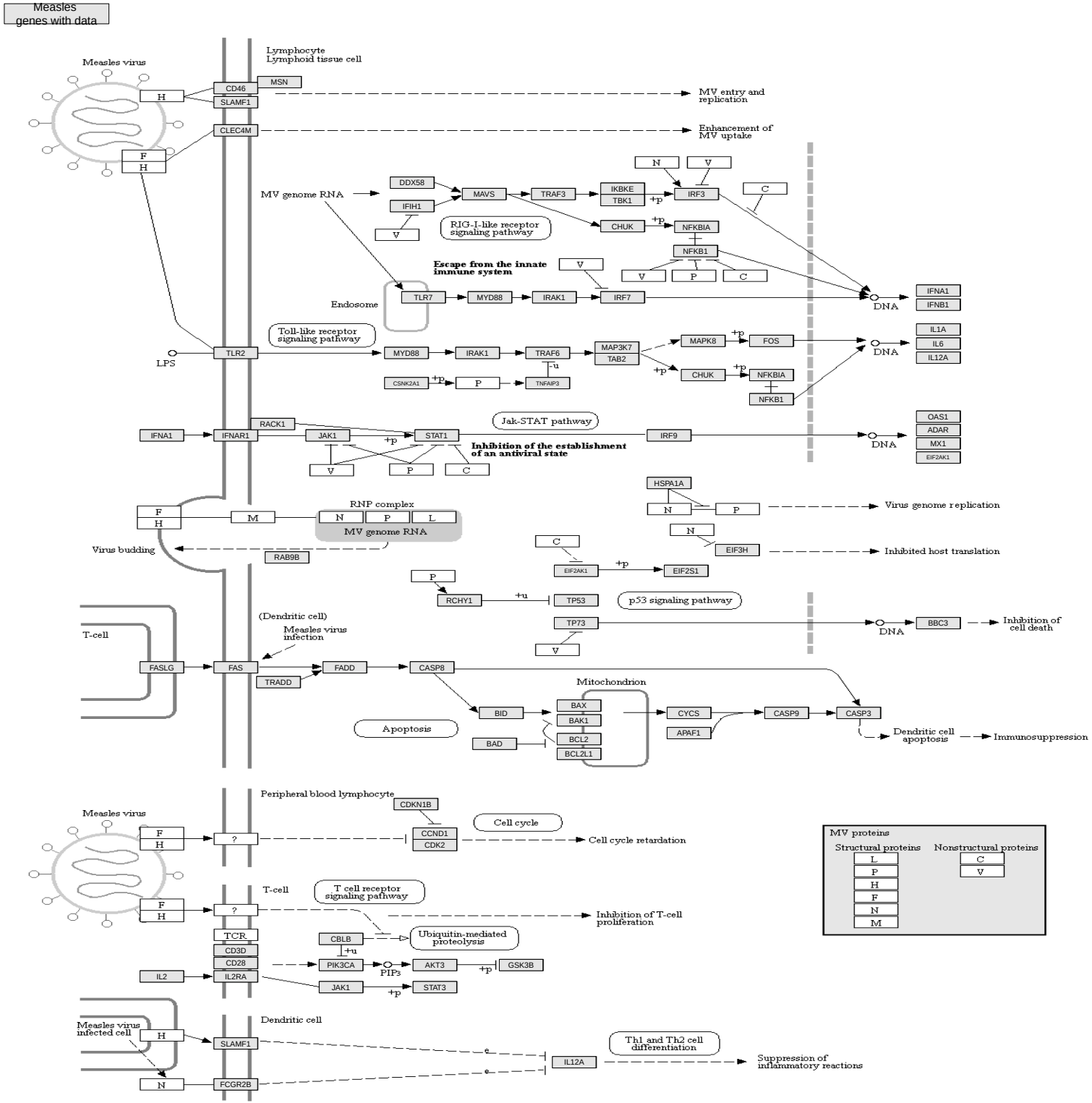
Measles


all genes
maximum = 3
sink node genes
maximum = 2


<log10 s>
log10 smax
2
1
0
−1
−2
group 1
group 2
group 3
group 4
group 5
group 6
group 7
group 8



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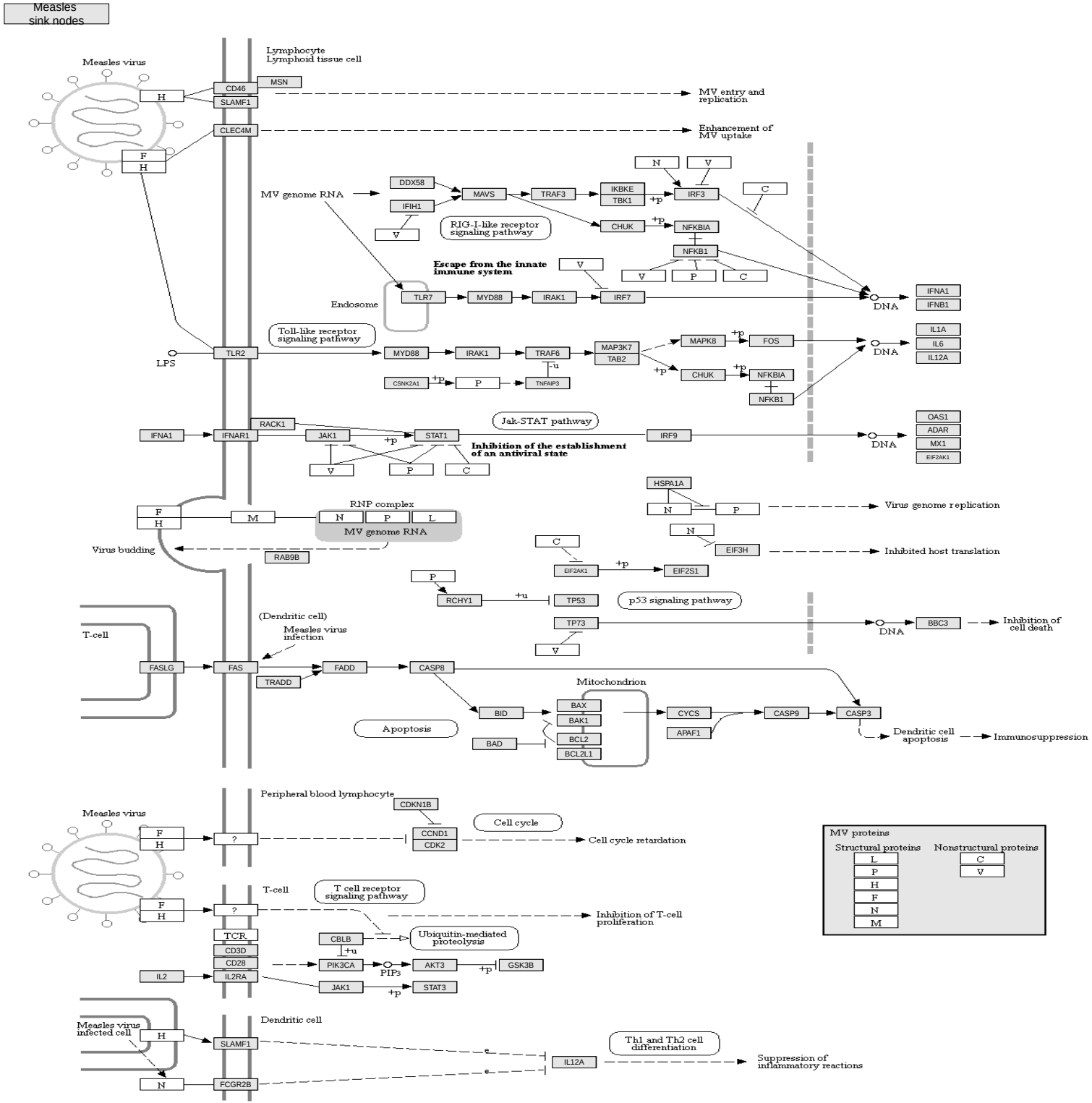
Measles sink nodes
Measles virus
Lymphocyte
Lymphoid tissue cell
H
CD46
MSN
SLAMF1
MV entry and replication
CLEC4M
Enhancement of MV uptake
F
H
MV genome RNA
DDX58
IFIH1
V
MAVS
TRAF3
IKBKE
TBK1
+p
IRF3
N
V
C
CHUK
+p
NFKBIA
NFKB1
RIG-I-like receptor signaling pathway
Escape from the innate immune system
V
V
P
C
Endosome
TLR7
MYD88
IRAK1
IRF7
DNA
IFNA1
IFNB1
Toll-like receptor signaling pathway
LPS
TLR2
MYD88
IRAK1
TRAF6
MAP3K7
TAB2
MAPK8
+p
FOS
DNA
IL1A
IL6
IL12A
CHUK
+p
NFKBIA
NFKB1
CSNK2A1
+p
P
TNFAIP3
-u
IFNA1
IFNAR1
RACK1
JAK1
+p
STAT1
Jak-STAT pathway
IRF9
DNA
OAS1
ADAR
MX1
EIF2AK1
Inhibition of the establishment of an antiviral state
V
P
C
HSPA1A
N
P
Virus genome replication
N
EIF3H
Inhibited host translation
RNP complex
F
H
M
N
P
L
MV genome RNA
Virus budding
RAB9B
C
EIF2AK1
+p
EIF2S1
P
RCHY1
+u
TP53
p53 signaling pathway
TP73
DNA
BBC3
Inhibition of cell death
V
(Dendritic cell)
Measles virus infection
T-cell
FASLG
FAS
TRADD
FADD
CASP8
Mitochondrion
BID
BAX
BAK1
BAD
BCL2
BCL2L1
CYCS
APAF1
CASP9
CASP3
Apoptosis
Dendritic cell apoptosis
Immunosuppression
Peripheral blood lymphocyte
CDKN1B
Measles virus
F
H
?
CCND1
CDK2
Cell cycle
Cell cycle retardation
T-cell
T cell receptor signaling pathway
F
H
?
Inhibition of T-cell proliferation
TCR
CD3D
CD28
IL2
IL2RA
CBLB
+u
Ubiquitin-mediated proteolysis
PIK3CA
PIP3
AKT3
+p
GSK3B
JAK1
+p
STAT3
Dendritic cell
Measles virus infected cell
H
N
SLAMF1
FCGR2B
IL12A
Th1 and Th2 cell differentiation
Suppression of inflammatory reactions
MV proteins
Structural proteins
L
P
H
F
N
M
Nonstructural proteins
C
V
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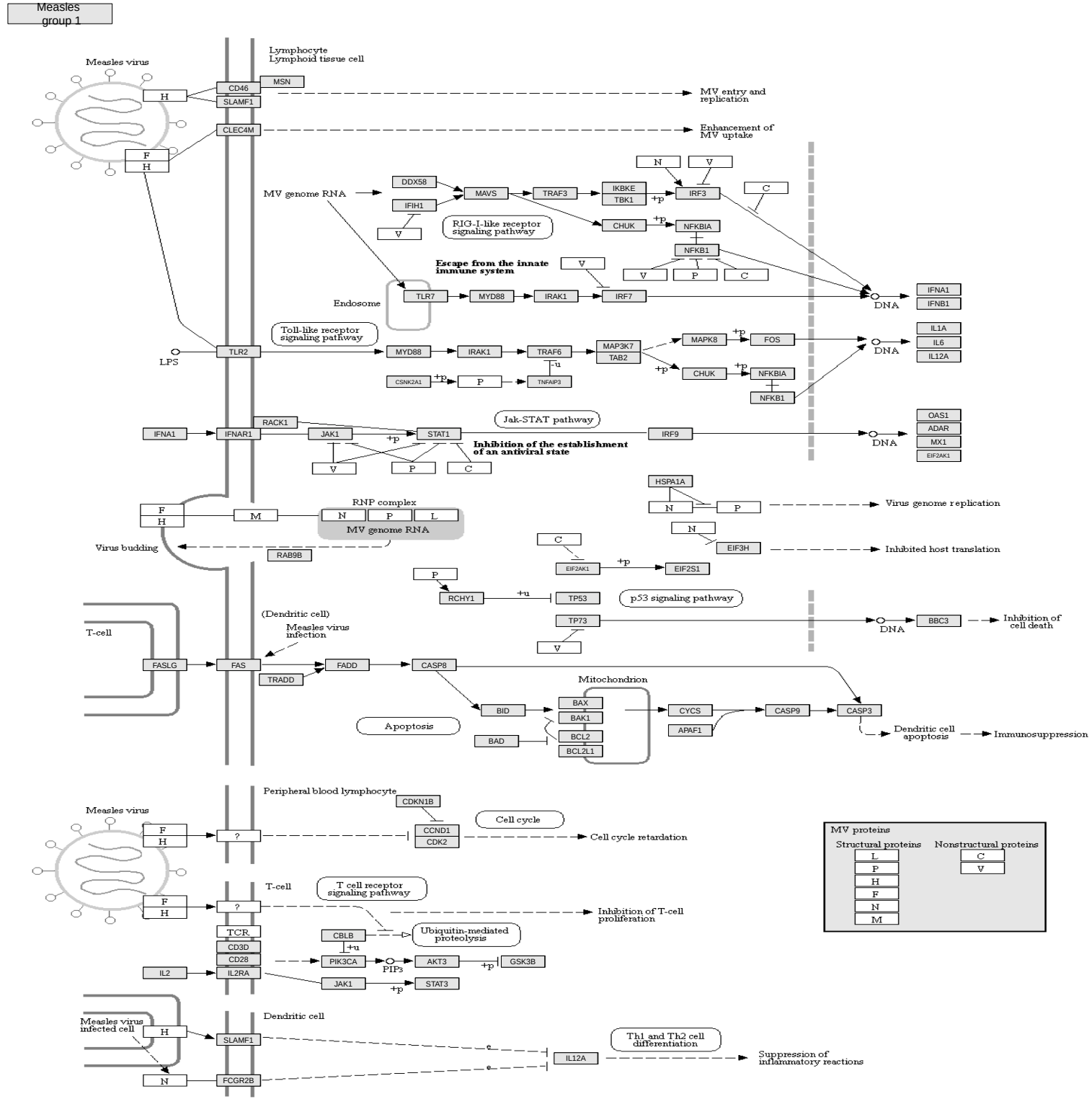
Measles
group 1



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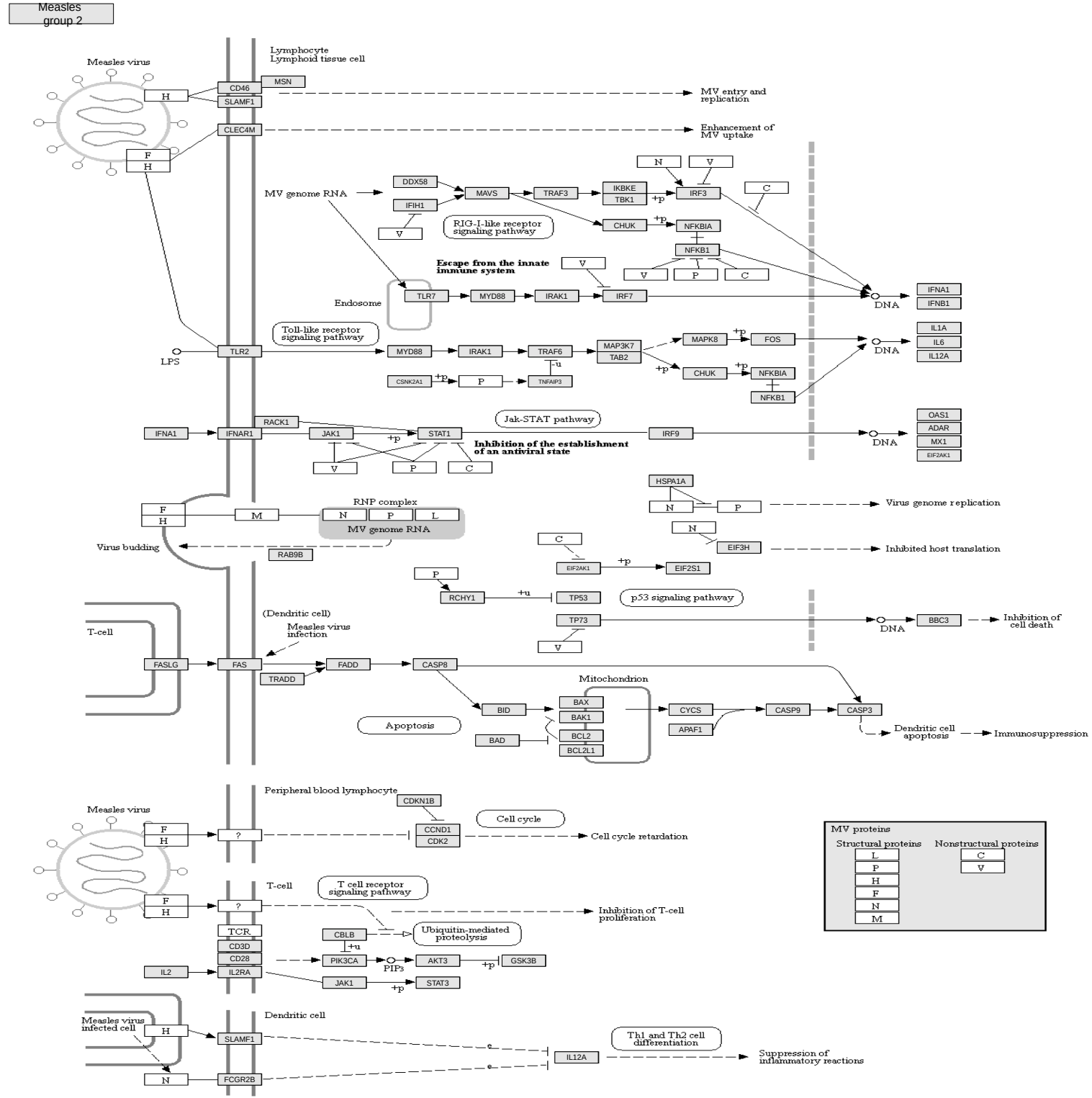
Measles
group 2



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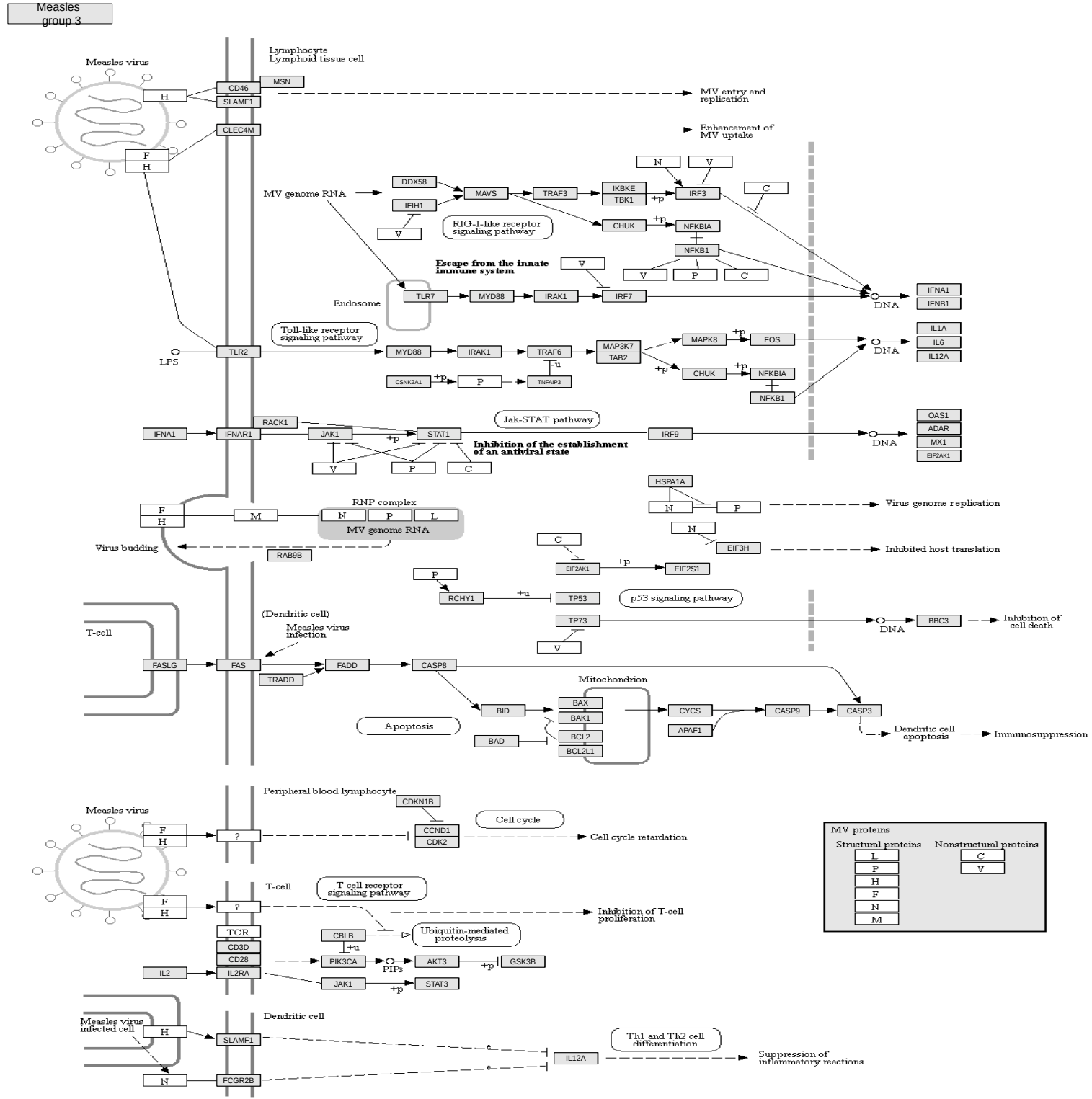
Measles group 3



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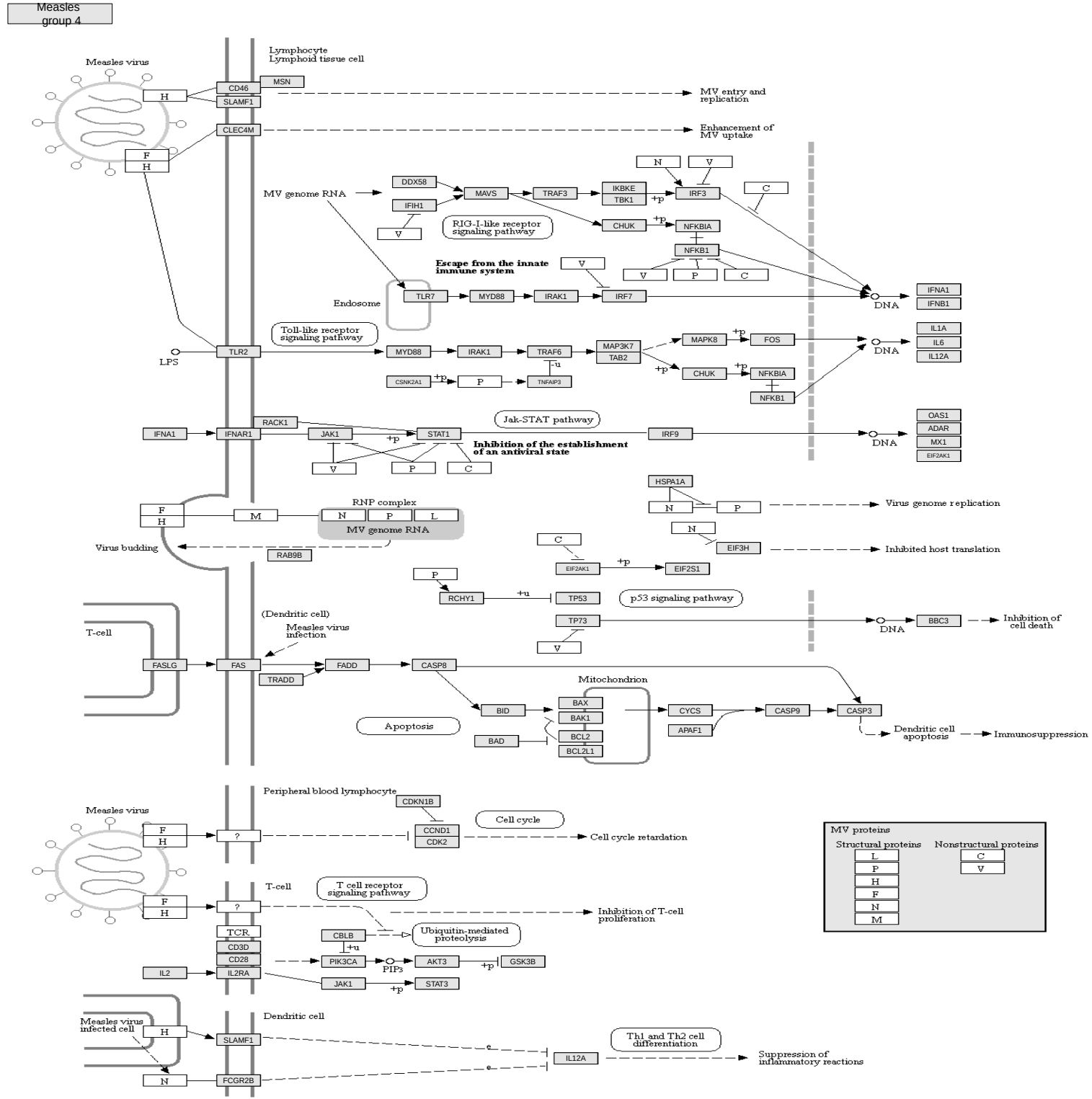
Measles group 4



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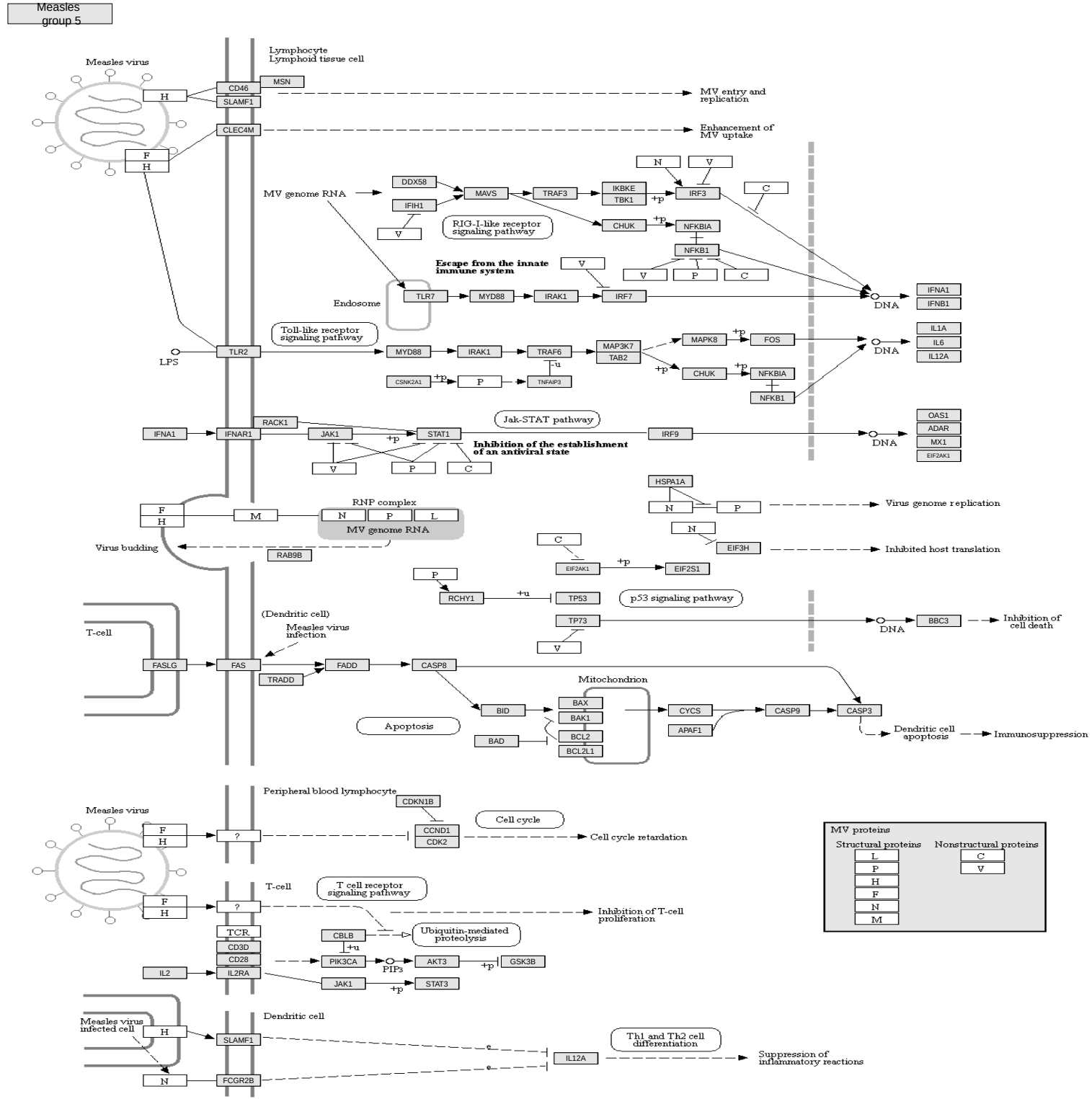
Measles group 5



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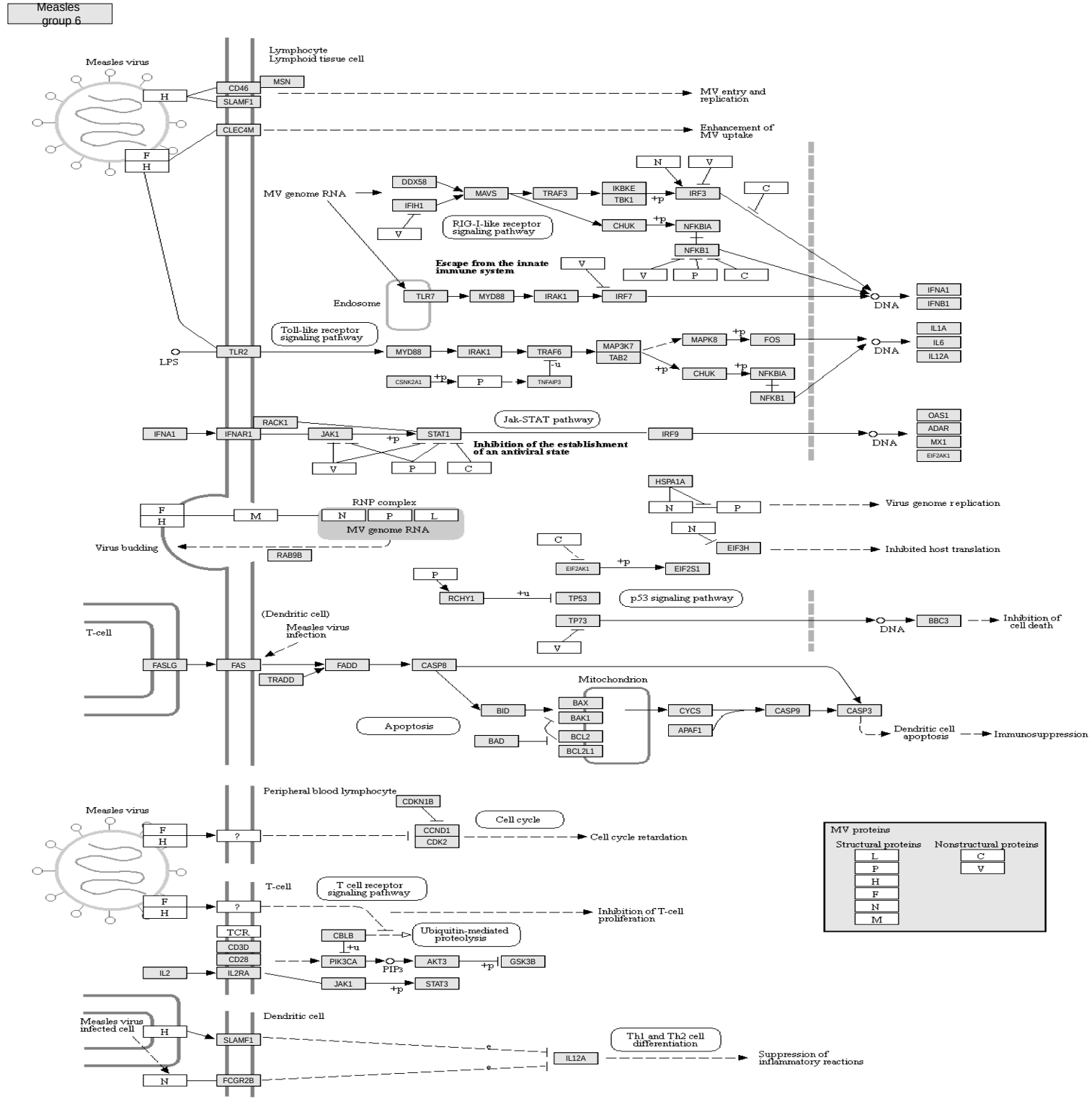
Measles
group 6



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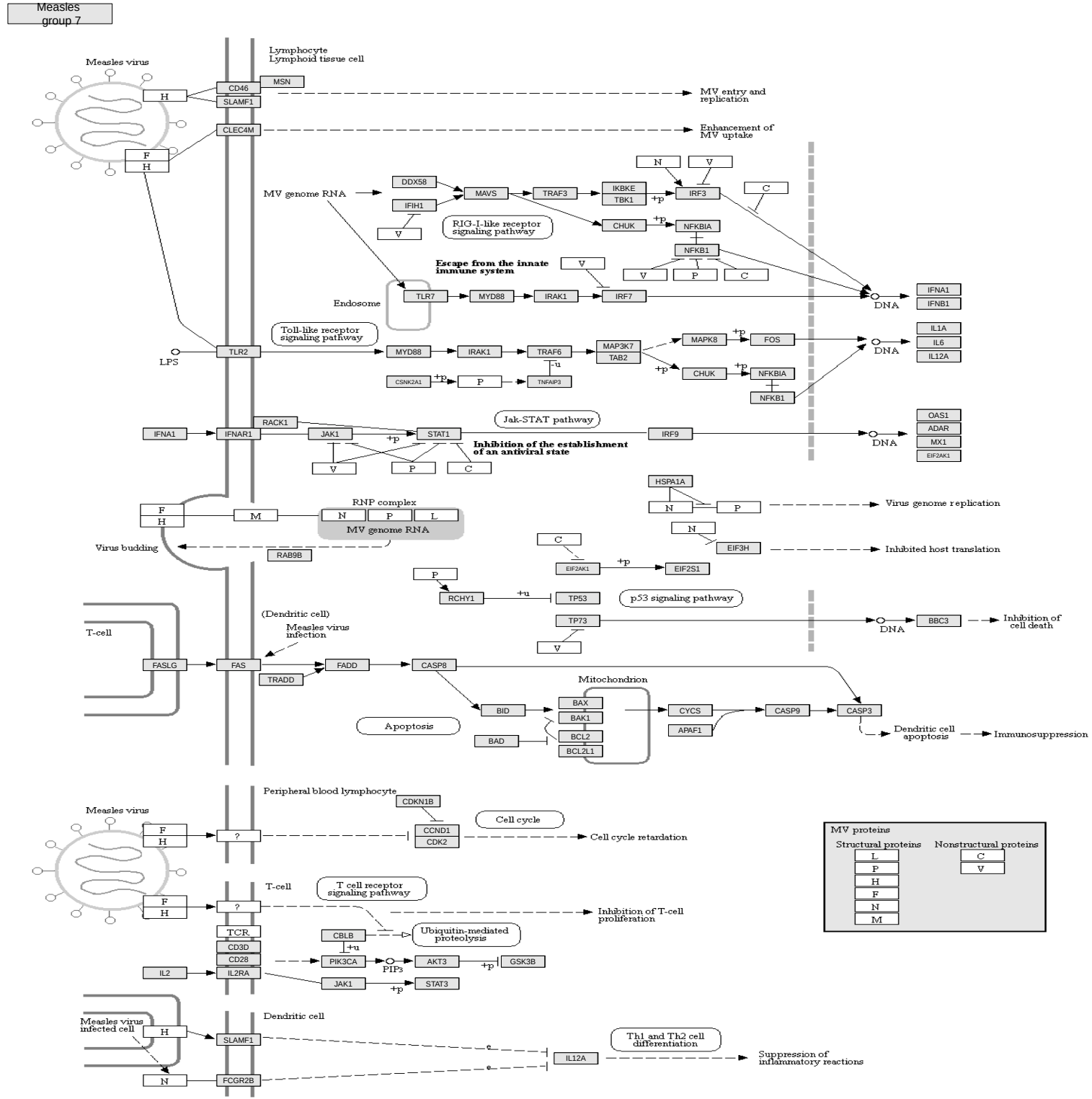
Measles group 7



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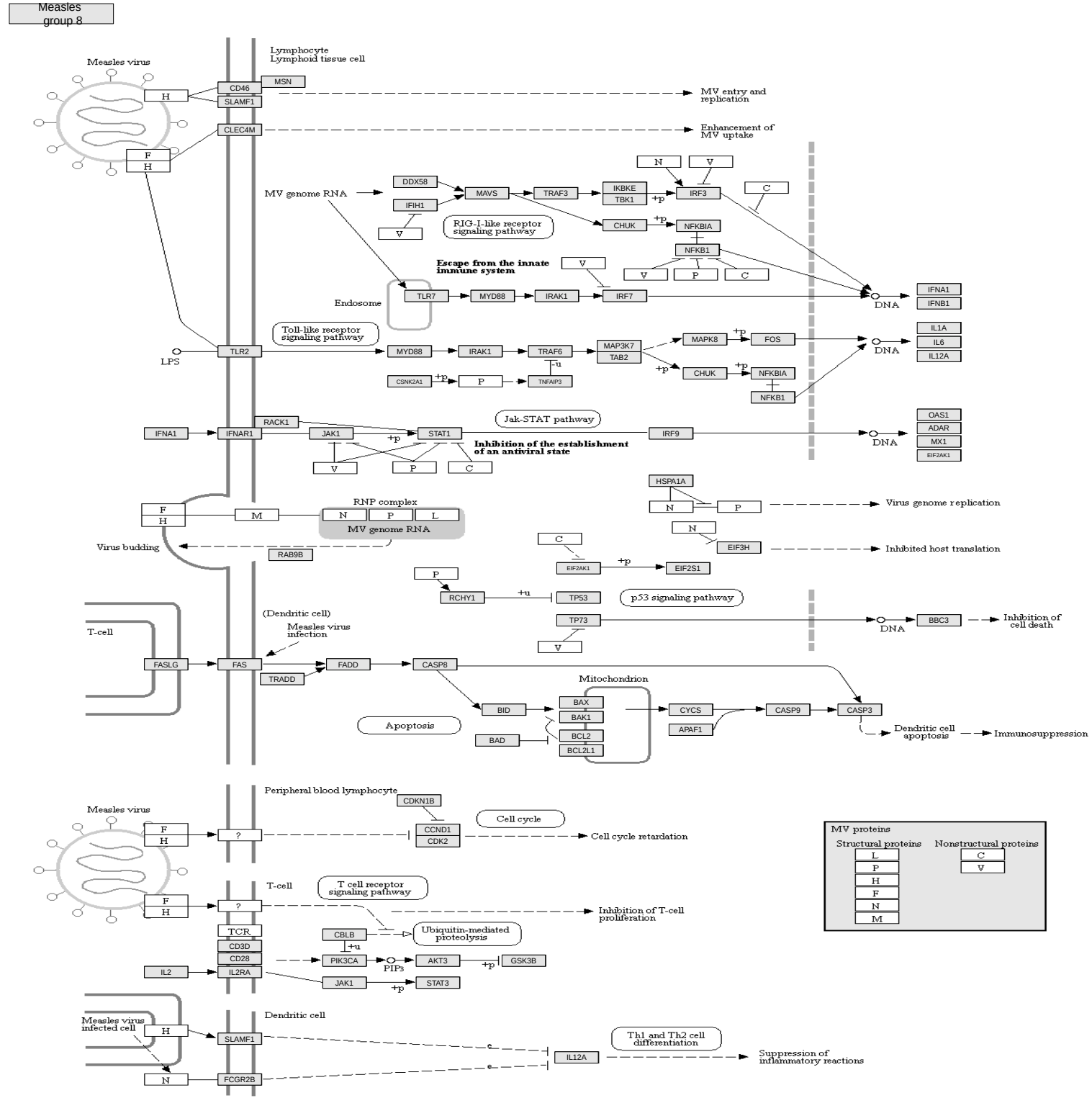
Measles
group 8



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