

Version=3.21301
EndTime=5.000000e 팔
Points=50
OutputTimeZero=1
RealTime=0
SleepTime=0
TimeUnit=s
ConcentrationUnit=M
VolumeUnit=L
TimeElasticities=0
Dynamics=1
SteadyState=0
Report=1
DynTitles=1
SSTitles=0
DynQuotes=0
SSQuotes=0
DynColWidth=12
SSColWidth=12
DynSeparator=32
SSSeparator=32
SSMCAUnscaled=0
SSStrategy=0
SSBackIntegration=1
RepStructuralAnalysis=0
RepStabilityAnalysis=0
RepMCA=1
NewtonLimit=50
SSResolution=1.000000e-009
RelativeTolerance=1.000000e-006
AbsoluteTolerance=1.000000e-012
AdamsMaxOrder=12
BDFMaxOrder=5
DerivationFactor=1.000000e-003
ReportFile=upynapy4.txt
DynamicsFile=upynapy3.dyn
SSFile=simresults.ss
Title=UNkin
TotalMetabolites=5
TotalSteps=3
TotalMoieties=2
TotalCompartments=1
TotalUDKinetics=0
Metabolite=U
Concentration=1e-008
Compartment=0
Type=1
Metabolite=Uk
Concentration=3.1e-006
Compartment=0
Type=1
Metabolite=N
Concentration=0.005
Compartment=0
Type=1
Metabolite=NU
Concentration=0

```

Compartment=0
Type=2
Metabolite=U2
Concentration=0.0024984
Compartment=0
Type=2
Metabolite= N NU
Concentration=0.1
Compartment=0
Type=7
Metabolite= 0.5*U 0.5*Uk - 0.5*N U2
Concentration=1.555000000000306e-006
Compartment=0
Type=7
Step=R2
Equation=U = Uk
KineticType=Mass action (reversible)
Flux=0
Reversible=1
Substrates=1
Products=1
Modifiers=0
Constants=2
Subs0=0
Prod0=1
Param0=500.80950310842
Param1=100
Step=R3
Equation=Uk N = NU
KineticType=Mass action (reversible)
Flux=0
Reversible=1
Substrates=2
Products=1
Modifiers=0
Constants=2
Subs0=1
Subs1=2
Prod0=3
Param0=8000483790.637199
Param1=100
Step=R8
Equation=U2 = U U
KineticType=Mass action (reversible)
Flux=0
Reversible=1
Substrates=1
Products=2
Modifiers=0
Constants=2
Subs0=4
Prod0=0
Prod1=0
Param0=1
Param1=10000000000
Compartment=compartment
Volume=1.000000e 팔

```

Comments

EndComments

PlotType=2

PlotDyn=0

Plot3d=0

PlotGrid=1

PlotKey=1

PlotTitles=1

PlotMultiplot=0

PlotContour=0

PlotHidden3d=0

PlotLogX=0

PlotLogY=0

PlotLogZ=0

PlotXEntry=0

PlotYTotal=1

PlotZTotal=1

PlotY0=1

PlotZ0=-1

User-defined functions

Items=6

Name=Kdim

Description= $a \cdot n^2 / (b \cdot (m)^2)$

Nodes=18

Node=37, 64

Node=73, 97

Title=R8 (k2)

Type=6

I=R8

J=k2

Node=79, 42

Node=73, 110

Title=R2 (k2)

Type=6

I=R2

J=k2

Node=79, 94

Node=78, 64

Value=2.000000e $\frac{\pi^2}{3}$

Node=79, 47

Node=79, 40

Node=73, 98

Title=R8 (k1)

Type=6

I=R8

J=k1

Node=79, 42

Node=79, 40

Node=73, 109

Title=R2 (k1)

Type=6

I=R2

J=k1

Node=79, 43

Node=73, 110

Title=R2 (k2)

```

Type=6
I=R2
J=k2
Node=79,41
Node=79,94
Node=78,64
Value=2.000000e ㅍㅍ
Node=79,41
Name=Kdimconc
Description=k/(m)^2
Nodes=10
Node=37,64
Node=73,107
Title=[U2]
Type=2
I=U2
Node=79,47
Node=79,40
Node=73,109
Title=[U]
Type=2
I=U
Node=79,43
Node=73,110
Title=[Uk]
Type=2
I=Uk
Node=79,41
Node=79,94
Node=78,64
Value=2.000000e ㅍㅍ
Name=Kt
Description=f/b
Nodes=4
Node=37,64
Node=73,102
Title=R2(k1)
Type=6
I=R2
J=k1
Node=79,47
Node=73,98
Title=R2(k2)
Type=6
I=R2
J=k2
Name=Kass
Description=a*c/(b*(c))
Nodes=14
Node=37,64
Node=73,97
Title=R3(k1)
Type=6
I=R3
J=k1
Node=79,42

```

```

Node=73,99
Title=R2(k1)
Type=6
I=R2
J=k1
Node=79,47
Node=79,40
Node=73,98
Title=R3(k2)
Type=6
I=R3
J=k2
Node=79,42
Node=79,40
Node=73,99
Title=R2(k1)
Type=6
I=R2
J=k1
Node=79,43
Node=73,100
Title=R2(k2)
Type=6
I=R2
J=k2
Node=79,41
Node=79,41
Name=Kassconc
Description= $a/(b*(c))$ 
Nodes=12
Node=37,64
Node=73,97
Title=[NU]
Type=2
I=NU
Node=79,47
Node=79,40
Node=73,98
Title=[N]
Type=2
I=N
Node=79,42
Node=79,40
Node=73,99
Title=[Uk]
Type=2
I=Uk
Node=79,43
Node=73,100
Title=[U]
Type=2
I=U
Node=79,41
Node=79,41
Name=conversion
Description= $a/b$ 
Nodes=4

```

Node=37,64
Node=73,97
Title=[NU]
Type=2
I=NU
Node=79,47
Node=73,98
Title=[N]i
Type=1
I=N
Interactive time course
Items=3
Title=[N]t
Type=3
I=N
Title=[NU]t
Type=3
I=NU
Title=[U2]t
Type=3
I=U2
Time-course output
Items=7
Title=time
Type=14
Title=conversion
Type=24
Title=[U]t
Type=3
I=U
Title=[Uk]t
Type=3
I=Uk
Title=[N]t
Type=3
I=N
Title=[NU]t
Type=3
I=NU
Title=[U2]t
Type=3
I=U2
Steady-state output
Items=0
Scan
Enabled=1
Dimension=2
Title=[U2]i
Type=1
I=U2
Min=0.00025000000000000
Max=0.05000000000000000
Density=5
Log=1
Independent=1
Grid=0
Title=[N]i

Type=1
I=N
Min=0.000500000000000000
Max=0.100000000000000000
Density=5
Log=1
Independent=0
Grid=0
Parameter Links
Items=0
Optimisation
Enabled=0
SetModel=0
Sign=1.0
OptimisedDyn=1
Constrained=0
Method=Evolutionary programming
P0=500
P1=10
P2=1e-005
P3=1
P4=1
Title=Kdim
Type=24
Parameters=1
MinType=1
MaxType=1
MinIneq=0
MaxIneq=0
MinD=1000000000
MaxD=1000000000
IsParameter=0
Title=Kdim
Type=24
Min=1.000000000000000000
Max=2.000000000000000000
Density=2
Log=0
Independent=1
Grid=-1
Title=
Type=0
Title=
Type=0
Fitting
Enabled=0
SetModel=1
FitDyn=1
Constrained=0
FitDataFile=5mM.dat
FitSeparator=9
FitLines=15
Method=Evolutionary programming
P0=500
P1=10
P2=1e-005
P3=1

P4=1
Parameters=6
MinType=1
MaxType=1
MinIneq=1
MaxIneq=1
MinD=1e-010
MaxD=10000000000
IsParameter=1
Title=R2 (k2)
Type=6
I=R2
J=k2
Min=1.0000000000000000
Max=2.0000000000000000
Density=2
Log=0
Independent=1
Grid=-1
Title=
Type=0
Title=
Type=0
MinType=1
MaxType=1
MinIneq=1
MaxIneq=0
MinD=8000000000
MaxD=10000000000
IsParameter=1
Title=R3 (k1)
Type=6
I=R3
J=k1
Min=1.0000000000000000
Max=2.0000000000000000
Density=2
Log=0
Independent=1
Grid=-1
Title=
Type=0
Title=
Type=0
MinType=1
MaxType=1
MinIneq=1
MaxIneq=1
MinD=1e-010
MaxD=10000
IsParameter=1
Title=R3 (k2)
Type=6
I=R3
J=k2
Min=1.0000000000000000
Max=2.0000000000000000

Density=2
Log=0
Independent=1
Grid=-1
Title=
Type=0
Title=
Type=0
MinType=1
MaxType=1
MinIneq=1
MaxIneq=1
MinD=1e-005
MaxD=100000
IsParameter=1
Title=R2 (k1)
Type=6
I=R2
J=k1
Min=1.0000000000000000
Max=2.0000000000000000
Density=2
Log=0
Independent=1
Grid=-1
Title=
Type=0
Title=
Type=0
MinType=1
MaxType=1
MinIneq=1
MaxIneq=1
MinD=70000000
MaxD=700000000
IsParameter=0
Title=Kdim
Type=24
Min=1.0000000000000000
Max=2.0000000000000000
Density=2
Log=0
Independent=1
Grid=-1
Title=
Type=0
Title=
Type=0
MinType=1
MaxType=1
MinIneq=1
MaxIneq=1
MinD=10000000
MaxD=500000000
IsParameter=0
Title=Kass
Type=24

Min=1.0000000000000000
Max=2.0000000000000000
Density=2
Log=0
Independent=1
Grid=-1
Title=
Type=0
Title=
Type=0
AdjConcentrations=0
FitXItems=1
Title=time
Type=14
FitYItems=1
Title=[NU]t
Type=3
I=NU