

Appendix Table 1. Parameter values or ranges

	Baseline LHS	Priming Focused	Grouping	Ref.
<b>LN in general</b>				
probDisplayBig	0.002	0.002	Basic Setups	
smallSphereRadius	0.35	0.35	Basic Setups	
largeSphereRadius	0.85	0.85	Basic Setups	
probMoveInPreferredDirection	0.6 - 0.9	0.8	Movement	
probMoveInNonOppositeDirection	0.95 - 0.99	0.95	Movement	
probMoveInPreferredDirectionBlock	0.5 - 0.8	0.6	Movement	
probMoveInNonOppositeDirectionBlock	0.9 - 0.95	0.92	Movement	
recruitmentRatioKToH	NA	0.5	Population	
ratioLogisticShapeToMedian	NA	0	Interaction	
cognateFrequency	300	10000	Interaction	
recruitmentCount	1	1	Population	
moveStatsStartTimeStep	6912	6912	Basic Setups	
moveStatsLimit	144	144	Basic Setups	
secondsPerSlice	25	25	Basic Setups	
bindingRadius	2	2	Interaction	
relocationRadius	2	2	Movement	
frGenModulus	1000	1000	Initializtion	
trajectoryFreePathAngleLimit	45	45	Movement	
unbindingCheckFrequency	1	1	Basic Setups	
<b>CD4+ T cells</b>				
minAge	165	165	Population	
maxAge	365	365	Population	
maxAgeStdDev	15	15	Population	
medianPMhcBindingProb	150	100 - 300	Interaction	
shapePMhcBindingProb	15	10 - 50	Interaction	
maxBindingTime	16	5 - 20	Interaction	
maxBindingTimeStdDev	4	4	Interaction	
medianPrimingProb	2000	1000 - 3000	Interaction	
shapePrimingProb	NA	100 - 300	Interaction	
maxTimeActive	96	96	Population	
maxTimeActiveStdDev	4	4	Population	
maxDivision	4	4	Population	
doublingPeriod	8	8	Population	
maxTimeEffector	60	60	Population	
maxTimeEffectorStdDev	1	1	Population	
probRecruitment	0.15 - 0.4	0.26	Population	
probInitialization	0.422	0.422	Initializtion	
searchTimeBegin	1	2	Basic Setups	

**CD8+ T cells**

minAge	165	165	Population
maxAge	365	365	Population
maxAgeStdDev	15	15	Population
medianPMhcBindingProb	150	100 - 300	Interaction
shapePMhcBindingProb	15	10 - 50	Interaction
maxBindingTime	16	5 - 20	Interaction
maxBindingTimeStdDev	4	4	Interaction
medianPrimingProb	2000	1000 - 3000	Interaction
shapePrimingProb	NA	100 - 300	Interaction
maxTimeActive	96	96	Population
maxTimeActiveStdDev	4	4	Population
maxDivision	8	4	Population
doublingPeriod	8	8	Population
maxTimeEffector	60	60	Population
maxTimeEffectorStdDev	1	1	Population
probRecruitment	0.075 - 0.2	0.13	Population
probInitialization	0.211	0.211	Initializtion
searchTimeBegin	1	4	Basic Setups

**DCs**

minAge	1	1	Population
maxAge	11	11	Population
maxAgeStdDev	2	2	Population
idcMaturationpMHCIncrement	50	50 - 200	Interaction
idcMdcBoundary	50	50	Interaction
pMHCIIHalfLife	25	10 - 100	Interaction
pMHCIIIHalfLife	100	20 - 200	Interaction
unbindingThreshold	100	75 - 150	Interaction
matureAvgAgeEntry	20	20	Population
maxTimeMature	60	60	Population
maxTimeMatureStdDev	5	5	Population
probEffectorHelperLicensesMdc	0.005	0.001 - 0.1	Interaction
timeBeingLicensed	36	36	Population
timeBeingLicensedStdDev	4	4	Population
probRecruitment	NA	0.06	Population
probInitialization	0.00115	0.00115	Initializtion
probIDCActivation	0.01	0.001 - 0.1	Interaction
movementInterval	4	4	Movement
recruitmentStart	5	5	Infection Scenario
recruitmentEnd	8	10(acute) / 0(chronic)	Infection Scenario
recruitmentInterval	35	1	Infection Scenario
recruitmentTopSlice	159	159	Physiological Structure
recruitmentBottomSlice	85	85	Physiological Structure

recruitmentCount	2	1	Infection Scenario
size	2	2	Physiological Structure
maxNumberDCs	400	400	Infection Scenario
maxNumberDCsResting	40	40	Population

**Ports**

HEV_RANDOM count	100 - 300	180	Physiological Structure
top	157	154	Physiological Structure
bottom	50	50	Physiological Structure
EL_RANDOM count	100 - 300	300	Physiological Structure
top	50 - 100	77	Physiological Structure

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