

S3 Table: T-invariants of the Petri net.

T-invariant ID (Size)	Transitions (Reactions)	Biological Meaning
TI1 (15)	Inv, T1, SCVdamage, T16iii, Deg1, T35, Syn1, T3i, T33, T36, Syn5, T37, T34, Syn9, Output	Galectin-8-dependent xenophagy of <i>Salmonella</i> inside a damaged SCV.
TI2 (37)	Inv, SCVdamage, T1, Syn1, T35, T3i, T33, T6, T8, T36, Syn7, Syn5, Syn6, T2i, T34, T7, T5, T13, Deg2, T16, Syn4, Syn3, T14, T13i, Syn2, T37, T14i, T15, 4*Syn8, T10, Syn9, T11, T12, Output	Galectin-8 and ubiquitin-dependent xenophagy of <i>Salmonella</i> inside a damaged SCV, including phosphorylation of OPTN.
TI3 (37)	Inv, SCVdamage, T1, T9, Syn1, T35, T4, T3i, T33, T6, T8, T36, Syn7, Syn5, Syn6, T2i, T34, T7, T5, T10i, T13, Deg2, T16, Syn4, Syn3, T14, T13i, Syn2, T37, T14i, T15, 4*Syn8, Syn9, Output	Galectin-8 and ubiquitin-dependent xenophagy of <i>Salmonella</i> inside a damaged SCV, including phosphorylation of OPTN.
TI4 (37)	Inv, SCVdamage, T1, T9, Syn1, T35, T4, T33, T6, T8, T36, Syn7, Syn5, Syn6, T34, T2, T3, T7, T5, T10i, T13, Deg2, T16, Syn4, Syn3, T14, T13i, Syn2, T37, T14i, T15, 4*Syn8, Syn9, Output	Galectin-8 and ubiquitin-dependent xenophagy of <i>Salmonella</i> inside a damaged SCV, including phosphorylation of OPTN.
TI5 (37)	Inv, SCVdamage, T1, Syn1, T35, T33, T6, T8, T36, Syn7, Syn5, Syn6, T34, T2, T3, T7, T5, T13, Deg2, T16, Syn4, Syn3, T14, T13i, Syn2, T37, T14i, T15, 4*Syn8, T10, Syn9, T11, T12, Output	Galectin-8 and ubiquitin-dependent xenophagy of <i>Salmonella</i> inside a damaged SCV, including phosphorylation of OPTN.
TI6 (28)	Inv, SCVdamage, T1, T9, Syn1, T35, T4, T3i, T33, T6, T8, T36, Syn7, Syn5, Syn6, T2i, T34, T7, T5, T10i, Syn4, Syn3, Syn2, T37, Syn9, T16i, Deg2i, Output	Galectin-8 and ubiquitin-dependent xenophagy of <i>Salmonella</i> inside a damaged SCV, including Nap1/Sintbad binding to NDP52.
TI7 (28)	Inv, SCVdamage, T1, Syn1, T35, T3i, T33, T6, T8, T36, Syn7, Syn5, Syn6, T2i, T34, T7, T5, Syn4, Syn3, Syn2, T37, T10, Syn9, T11, T16i, Deg2i, T12, Output	Galectin-8 and ubiquitin-dependent xenophagy of <i>Salmonella</i> inside a damaged SCV, including Nap1/Sintbad binding to NDP52.

TI8 (28)	Inv, SCVdamage, T1, Syn1, T35, T33, T6, T8, T36, Syn7, Syn5, Syn6, T34, T2, T3, T7, T5, Syn4, Syn3, Syn2, T37, T10, Syn9, T11, T16i, Deg2i, T12, Output	Galectin-8 and ubiquitin-dependent xenophagy of <i>Salmonella</i> inside a damaged SCV, including Nap1/Sintbad binding to NDP52.
TI9 (28)	Inv, SCVdamage, T1, T9, Syn1, T35, T4, T33, T6, T8, T36, Syn7, Syn5, Syn6, T34, T2, T3, T7, T5, T10i, Syn4, Syn3, Syn2, T37, Syn9, T16i, Deg2i, Output	Galectin-8 and ubiquitin-dependent xenophagy of <i>Salmonella</i> inside a damaged SCV, including Nap1/Sintbad binding to NDP52.
TI10 (26)	Inv, SCVdamage, T1, T9, Syn1, T35, T4, T33, T6, T8, T36, Syn5, Syn6, T34, T2, T3, T7, T5, Syn4, Syn3, T37, Syn2, T16ii, Syn9, Deg2ii, Output	Galectin-8 and ubiquitin-dependent xenophagy of <i>Salmonella</i> inside a damaged SCV.
TI11 (26)	Inv, SCVdamage, T1, T9, Syn1, T35, T4, T3i, T33, T6, T8, T36, Syn5, Syn6, T2i, T34, T7, T5, Syn4, Syn3, T37, Syn2, T16ii, Syn9, Deg2ii, Output	Galectin-8 and ubiquitin-dependent xenophagy of <i>Salmonella</i> inside a damaged SCV.
TI12 (25)	Inv, SCVdamage, T35, T33, T24, T22, T18, T20, T36, Syn5, Syn6, T25, T34, Deg3ii, T32ii, T21, T23, T19, Syn4, Syn3, T17, Syn2, T37, Syn9, Output	Ubiquitin-dependent xenophagy of <i>Salmonella</i> inside the cytosol.
TI13 (27)	Inv, SCVdamage, T35, Deg3i, T33, T22, T20, T18, T36, Syn7, Syn5, Syn6, T34, T32i, T21, T23, T19, Syn4, Syn3, T26, T17, T37, Syn2, T27, Syn9, T28, Output	Ubiquitin-dependent xenophagy of <i>Salmonella</i> inside the cytosol, including Nap1/Sintbad binding to NDP52.
TI14 (27)	Inv, SCVdamage, T35, Deg3i, T33, T24, T22, T20, T18, T36, Syn7, Syn5, T26i, Syn6, T25, T34, T32i, T21, T23, T19, Syn4, Syn3, T17, Syn2, T37, Syn9, Output	Ubiquitin-dependent xenophagy of <i>Salmonella</i> inside the cytosol, including Nap1/Sintbad binding to NDP52.
TI15 (36)	Inv, SCVdamage, T35, Deg3, T33, T22, T20, T18, T36, Syn7, T29, Syn5, Syn6, T32, T34, T30', T31, T29', T30, T21, T23, T19, Syn4, Syn3, T17, T26, Syn2, T37, T27, 4*Syn8, Syn9, T28, Output	Ubiquitin-dependent xenophagy of <i>Salmonella</i> inside the cytosol, including phosphorylation of OPTN.
TI16 (36)	Inv, SCVdamage, T35, Deg3, T33, T24, T22, T20, T18, T36, Syn7, T29, Syn5, T26i, Syn6, T25, T32, T34, T30', T31, T29', T30, T21, T23, T19, Syn4, Syn3, T17, Syn2, T37, 4*Syn8, Syn9, Output	Ubiquitin-dependent xenophagy of <i>Salmonella</i> inside the cytosol, including phosphorylation of OPTN.