

Removed variables	Justification
FADD	In wild type, the input FADD is only relevant when it is equal to 1. The case where FADD=0 will be considered later as a “mutant case”.
TNFR, DISC-TNF	DISC-TNF (Complex II) is directly activated by TNFR, which is itself directly activated by TNF. The influence of these two variables is replaced by a direct activation by TNF (losing the necessity of forming Complex II to activate the apoptosis pathway via TNF-induced signal).
DISC-FAS	For similar reasons, DISC-FAS is removed and replaced by a direct activation by FasL.
RIP1K, RIP1ub, IKK	RIP1K, RIP1ub, and IKK influences are replaced by RIP1 itself.
cFLIP	cFLIP is replaced by a direct inhibition of NFkB on caspase-8.
BCL2, BAX	The actions of BCL2 and BAX are included in the rules of MOMP (with inputs from NFkB) and of MPT for BCL2
XIAP, Cyt_c, apoptosome	The actions of these variables are included in the rule of caspase-3.
SMAC	SMAC rule is included in the rule of cIAP.

Supp. Table S3. List of variables hidden from the master model to generate the reduced model.