

Table 1: List of effector proteins involved in the inhibition of innate immune signalling pathways, their targets and functions.

Effector	AE Pathogen (number of genes)	Target(s)	Function	Reference
NleA	EPEC, EHEC, CR	NLRP3	Inhibition of Caspase-1 activation by interrupting the de-ubiquitination of NLRP3, which is required for inflammasome activation	[1]
NleB	EPEC (2), EHEC (2), CR (1)	GAPDH, FADD, TRADD, RIPK1, TNFR1	N-glycosylation of death domain-containing proteins TRADD, FADD, RIPK1, TNFR1 GAPDH	[2-11]
NleC	EPEC, EHEC, CR	NF- κ B subunits p65, p50, RelA, RelB and c-rel	Zinc-metalloprotease; Cleavage of NF- κ B subunits in their Rel-homology domain	[12-18]
NleD	EPEC, EHEC, CR	MAPKs JNK and p38	Zinc-metalloprotease; Cleavage of MAPKs JNK and p38	[13, 19]
NleE	EPEC, EHEC, CR	TAB2 and TAB3	Methylation of a conserved cysteine in TAB2 and TAB3	[2, 3, 7, 20-22]
NleF	EPEC, EHEC, CR	Caspases-3, -4, 8, -9, -11, RIPK1	Binding of the catalytic domain of Caspase-4, -8 and -9. Inhibition of Caspase-3, Caspase-8 and RIPK1 activity in response to FAS induction	[10, 23-27]
NleH	EPEC (2), EHEC (2), CR (1)	RPS3	Inhibition of nuclear translocation of RSP3. Suppression of ERK (NleH1), Caspase-3 (NleH2) and p38 activation (NleH1 and NleH2)	[31,32]
NleL	EHEC, CR	JNK	E3 ubiquitin ligase; Ubiquitination of JNK	[33]
EspL	EPEC, EHEC, CR	RIPK1, RIPK3, TRIF, ZBP/DAI	Cysteine protease; Cleavage of RHIM-proteins RIPK1, RIPK3, TRIF and DAI within the RHIM domain	[28]
Tir	EPEC, EHEC, CR	TRAF2, TRAF6, SHP-1, SHP-2	Inhibition of downstream signalling by binding of TRAF2, TRAF6, SHP-1, SHP-2	[7, 29, 30]

CR: *Citrobacter rodentium*. MAPK: mitogen-activated protein kinases.

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