

1 **Table A1**

2 **Top 20 hits from the TNF $\alpha$  Secondary Screen** (Known NF- $\kappa$ B regulators are

3 underlined)

Rank	Gene Name	Known Gene Function(s)
1	SNW1	Transcription Co-activator, Splicing Factor
2	TNFR1	TNF Receptor
3	UCHL3	De-ubiquitinating Enzyme
4	<u>GHRH</u>	Growth Hormone Releasing Hormone
5	BMP10	TGF Beta Activator
6	<u>NDP52</u>	Autophagy Regulator
7	CRHR2	Corticotropin Releasing Hormone
8	ATG7	Autophagy Regulator
9	NEF3	Neurofilament Protein
10	CFLAR	Apoptosis Regulator
11	CLCN2	Ion Channel
12	KDM4A	Histone Demethylase
13	HAPLN2	Extra-cellular Matrix Protein
14	BHMT2	Methyltransferase
15	PARVA	Matrix Remodeler
16	<u>RELA</u>	NF- $\kappa$ B
17	C5ORF11	Unknown Function
18	TRPC6	Ion Channel
19	LCE1B	Keratinization
20	CX3CL1	Chemokine

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7 **Table A2.**

8 **Top 20 hits from the LPS Secondary Screen (Known NF-κB regulators are underlined)**

Rank	Gene Name	Known Gene Function(s)
1	SNW1	Transcription Co-activator, Splicing Factor
2	UCHL3	De-ubiquitinating Enzyme
3	CFLAR	Apoptosis Regulator
4	PRKCG	Protein Kinase C Gamma
5	TRPC6	Ion Channel
6	DUSP15	Dual Specificity Phosphatase
7	<u>KPNA1</u>	Importin
8	BHMT2	Methyltransferase
9	GRIN2B	NMDA Receptor
10	ITCH	E3 Ub Ligase
11	APC2	Wnt Regulator
12	CINP	CDK Interacting Protein
13	<u>RELA</u>	NF-κB
14	<u>RIP1</u>	NF-κB Receptor Activator
15	FOSB	Transcription Factor (with Jun)
16	<u>TLR4</u>	LPS Receptor
17	KEL	Metallo-peptidase
18	KDM4A	Histone Demethylase
19	BFAR	Apoptosis Regulator
20	ATG7	Autophagy Regulator

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13 **Table A3**

14 **The top hits from endogenous validation in U87 cells**

Rank	Gene Name	Possible mechanism for regulating NF- $\kappa$ B
1	SNW1	Co-activator, NF- $\kappa$ B target gene splicing
2	GHRH	Via PAK-1 or STAT3
3	UCHL3	De-ubiquitination of complexes upstream of IKK
4	BHMT2	Methyl-transferase (PTM of p65)
5	KDM4A	Histone demethylase – regulating chromatin
6	CFLAR	Via reported RIP1 association
7	TRPC6	Ion channel – at the receptor level
8	BFAR	Cross talk with Apoptosis
9	DGKK	Kinase – unknown
10	CUL1	Via ubiquitination of complexes upstream of IKK
11	PRKCG	Kinase – phosphorylation of a key pathway protein
12	PARVA	Via matrix remodeling
13	GABARAP	Cross talk with autophagy (ATG5, ATG7)
14	NEF3	Via matrix remodeling

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