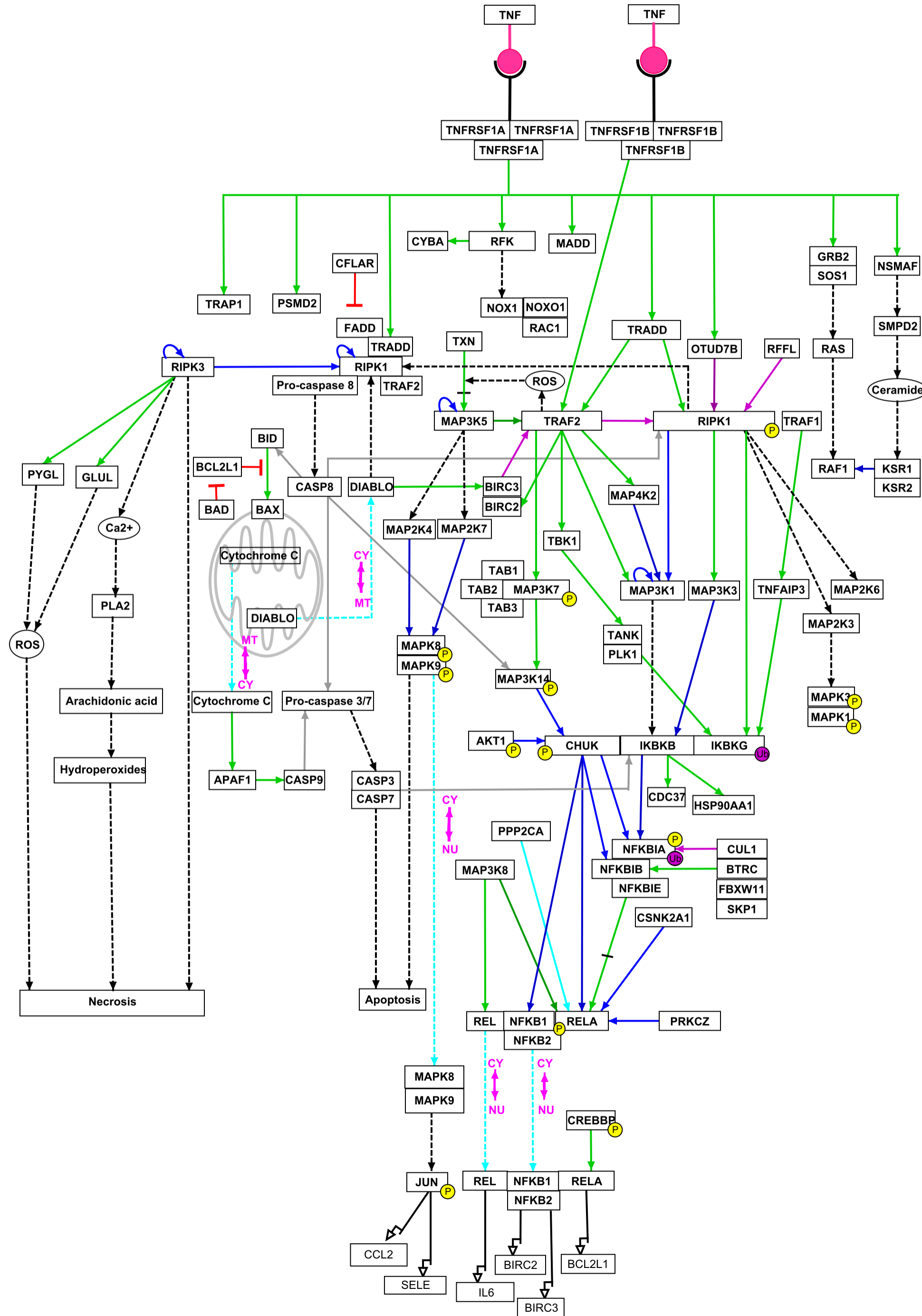


### TNF alpha Signal Transduction Pathway



**LEGEND**

	Ligand
	Receptor
	Protein
	mRNA
	Enzyme complex
	Protein-protein interaction
	Leads to through unknown mechanism
	Positive regulation of gene expression
	Negative regulation of gene expression
	Auto catalysis
	Acetylation
	Deacetylation
	Phosphorylation
	Dephosphorylation
	Sumoylation
	Desumoylation
	Ubiquitination
	Deubiquitination
	Methylation
	Demethylation
	Palmitoylation
	Proteolytic cleavage
	Activation
	Inhibition
	Transport
	Induced catalysis
	Translocation
	Cytoplasm
	Extracellular
	Endosome
	Endoplasmic reticulum
	Golgi apparatus
	Mitochondrion
	Nucleus
	Plasma membrane