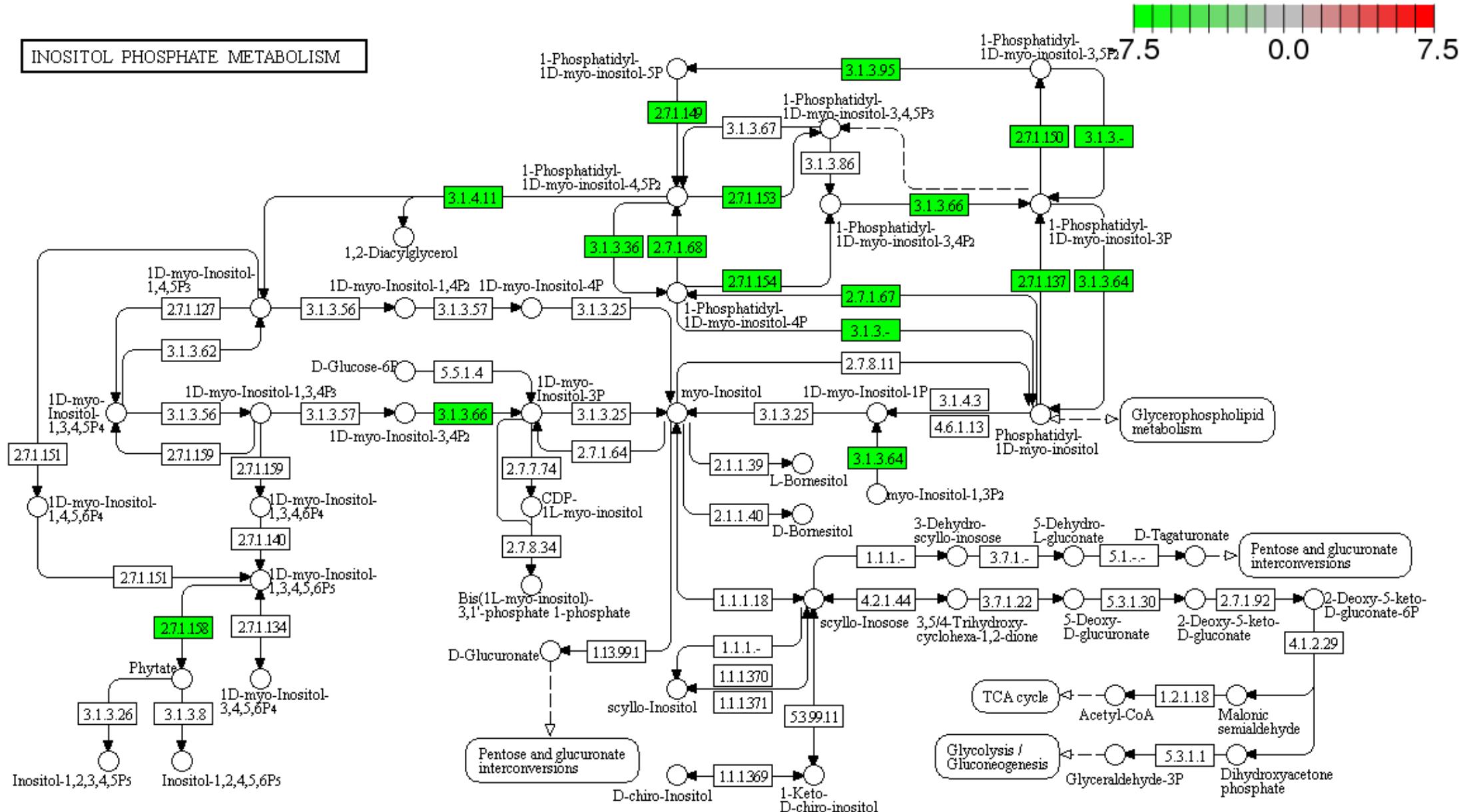
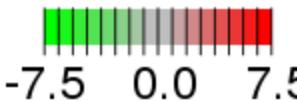
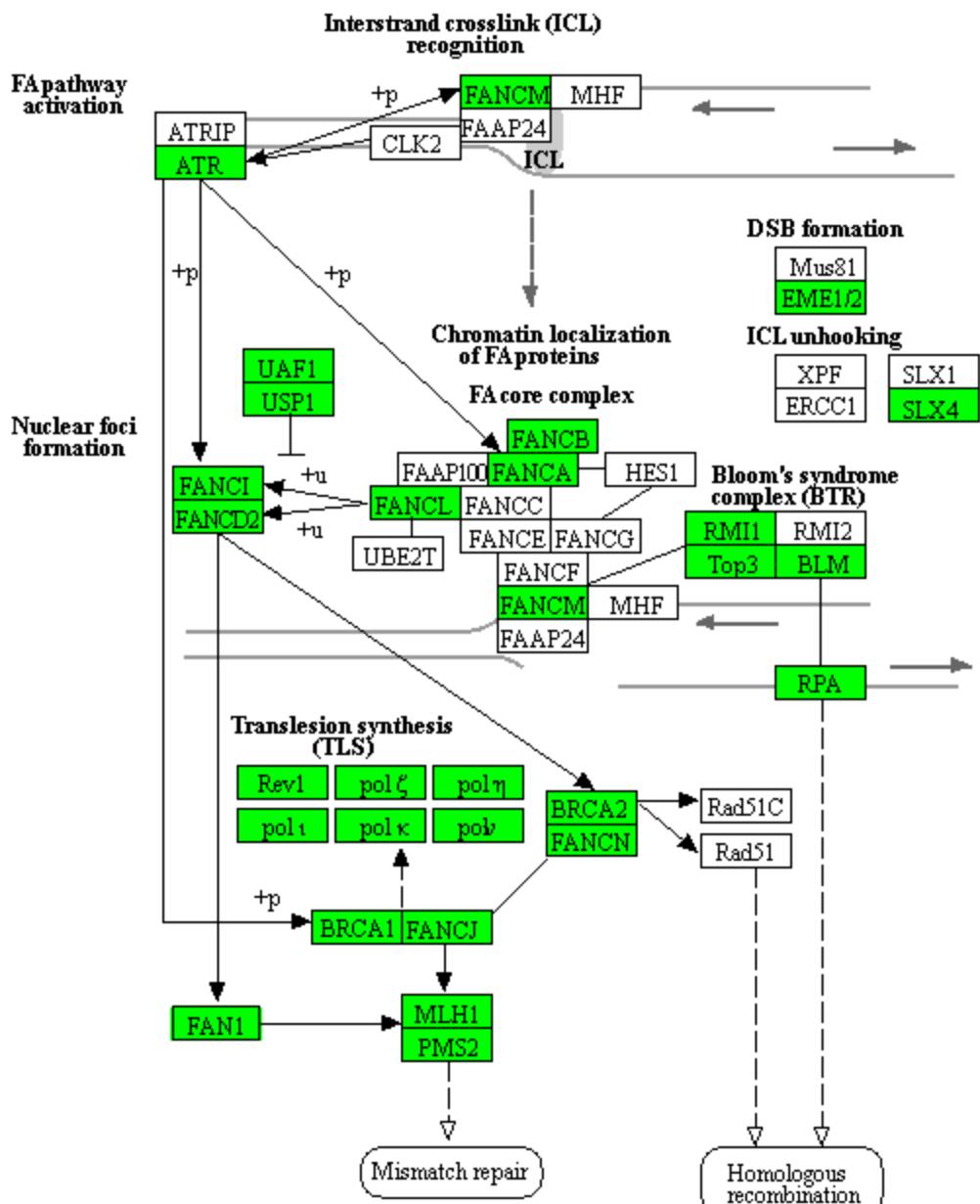


INOSITOL PHOSPHATE METABOLISM

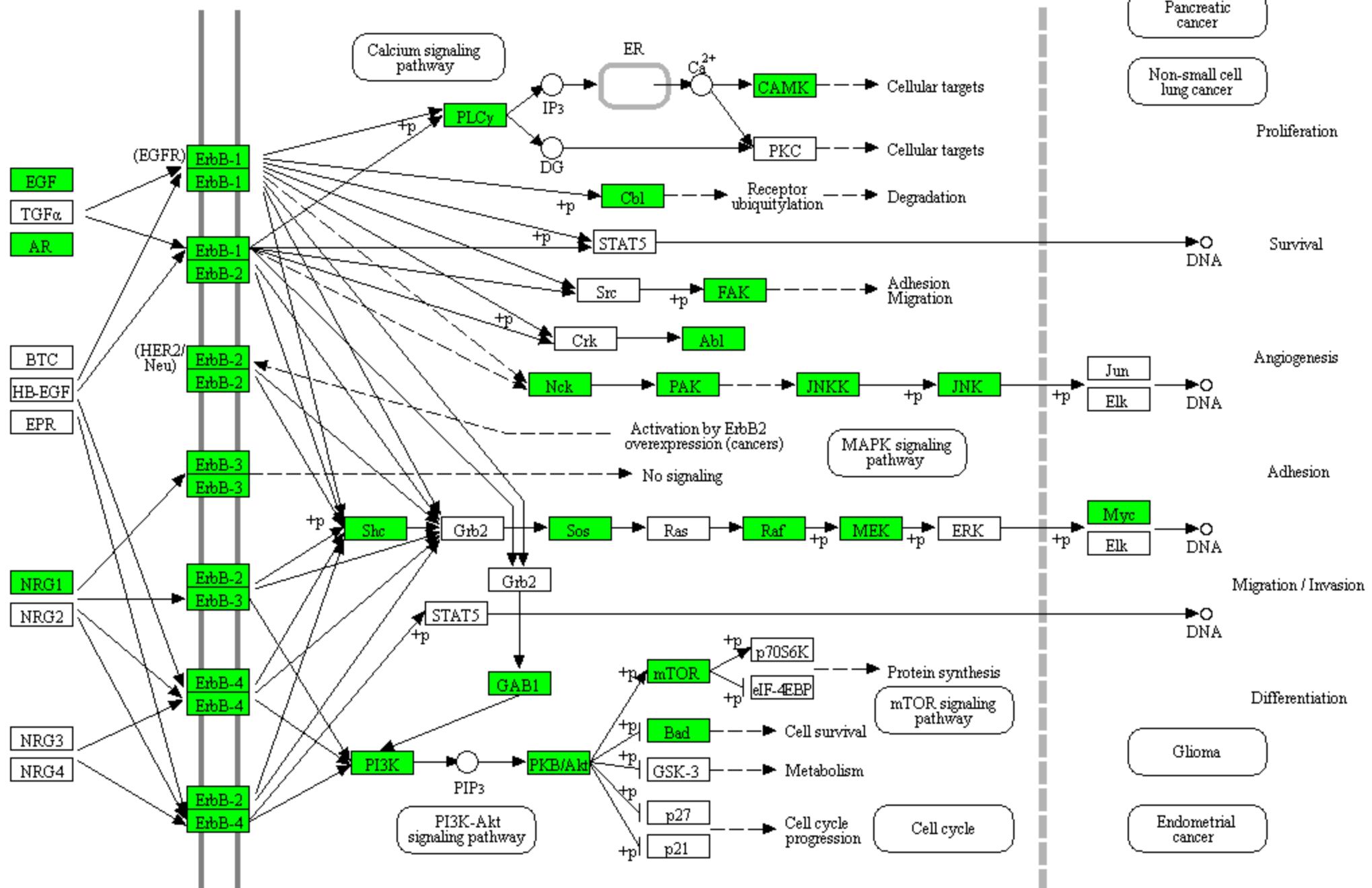


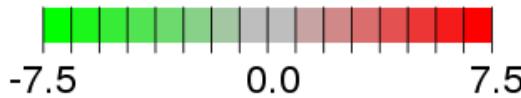


## FANCONI ANEMIA PATHWAY

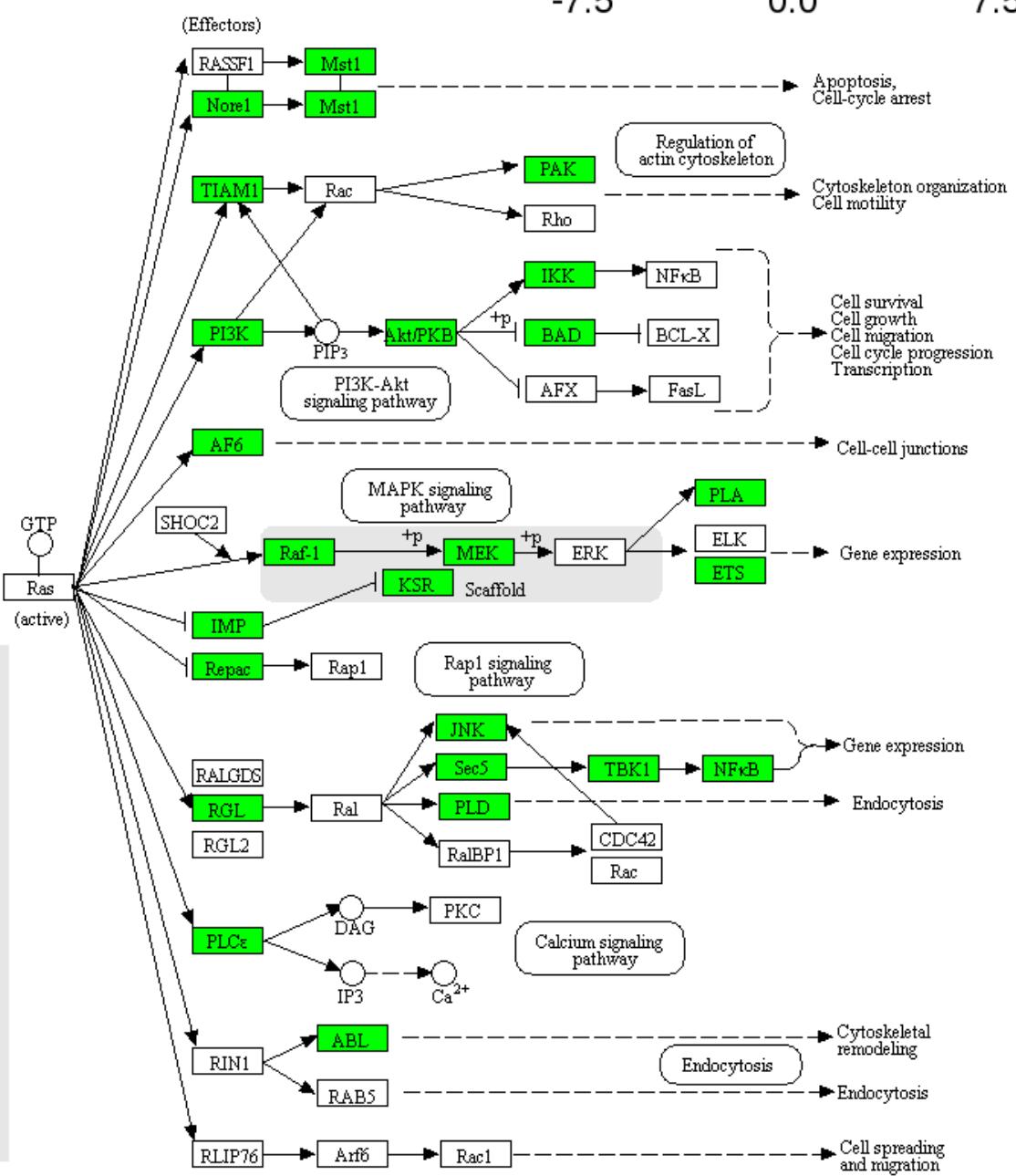
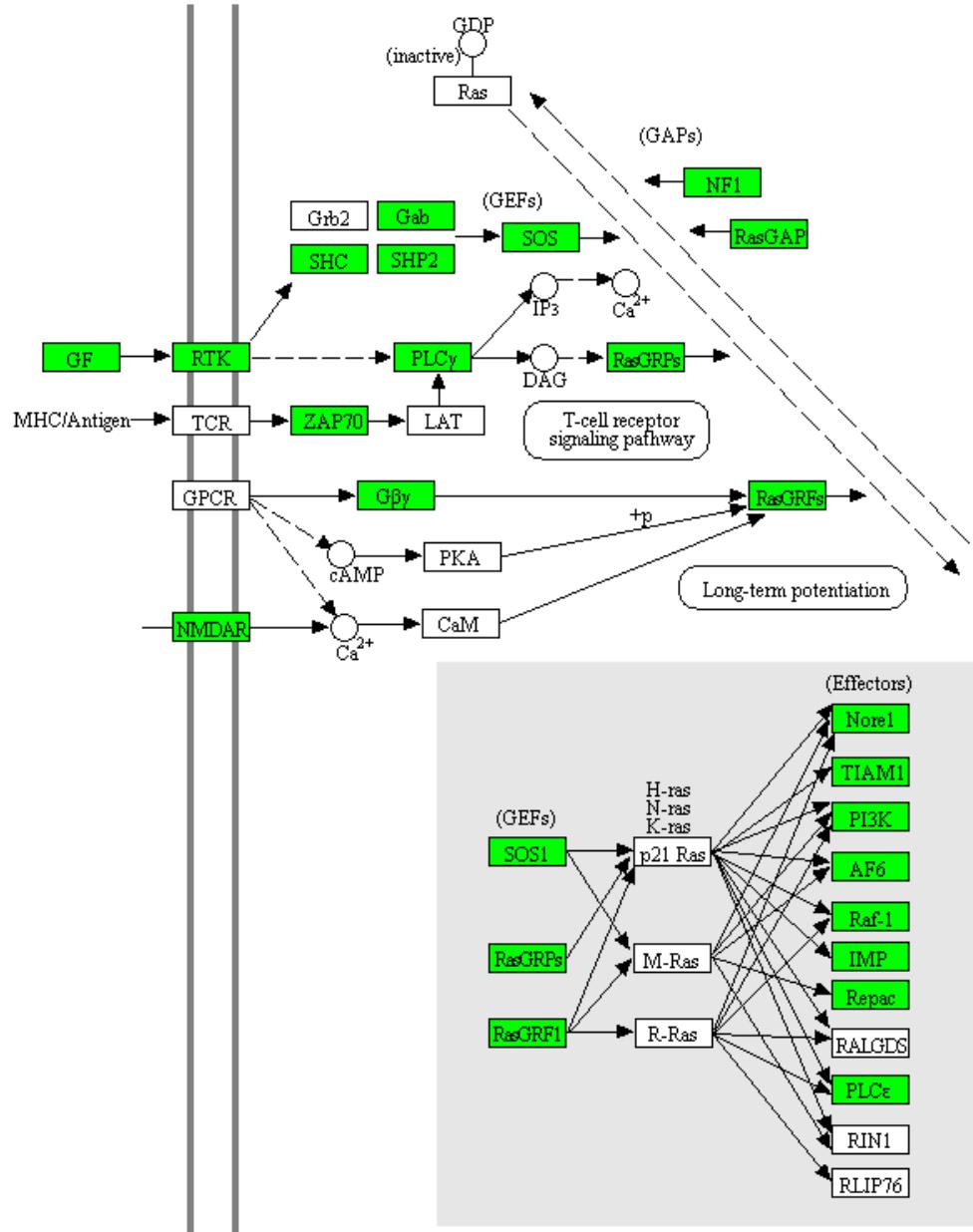


## ERBB SIGNALING PATHWAY

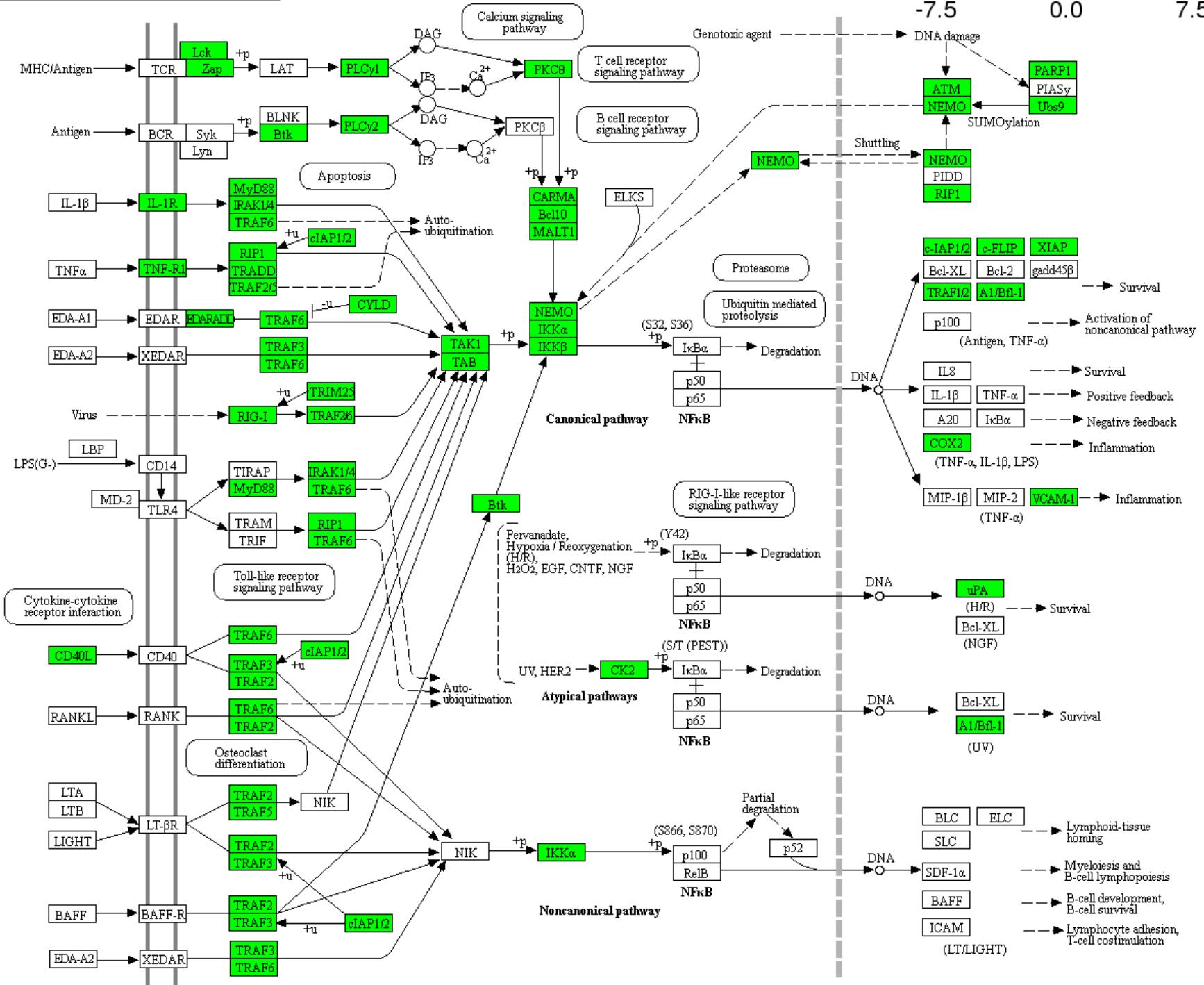


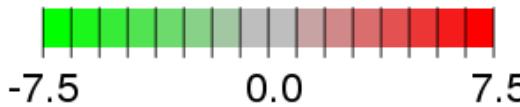


## RAS SIGNALING PATHWAY

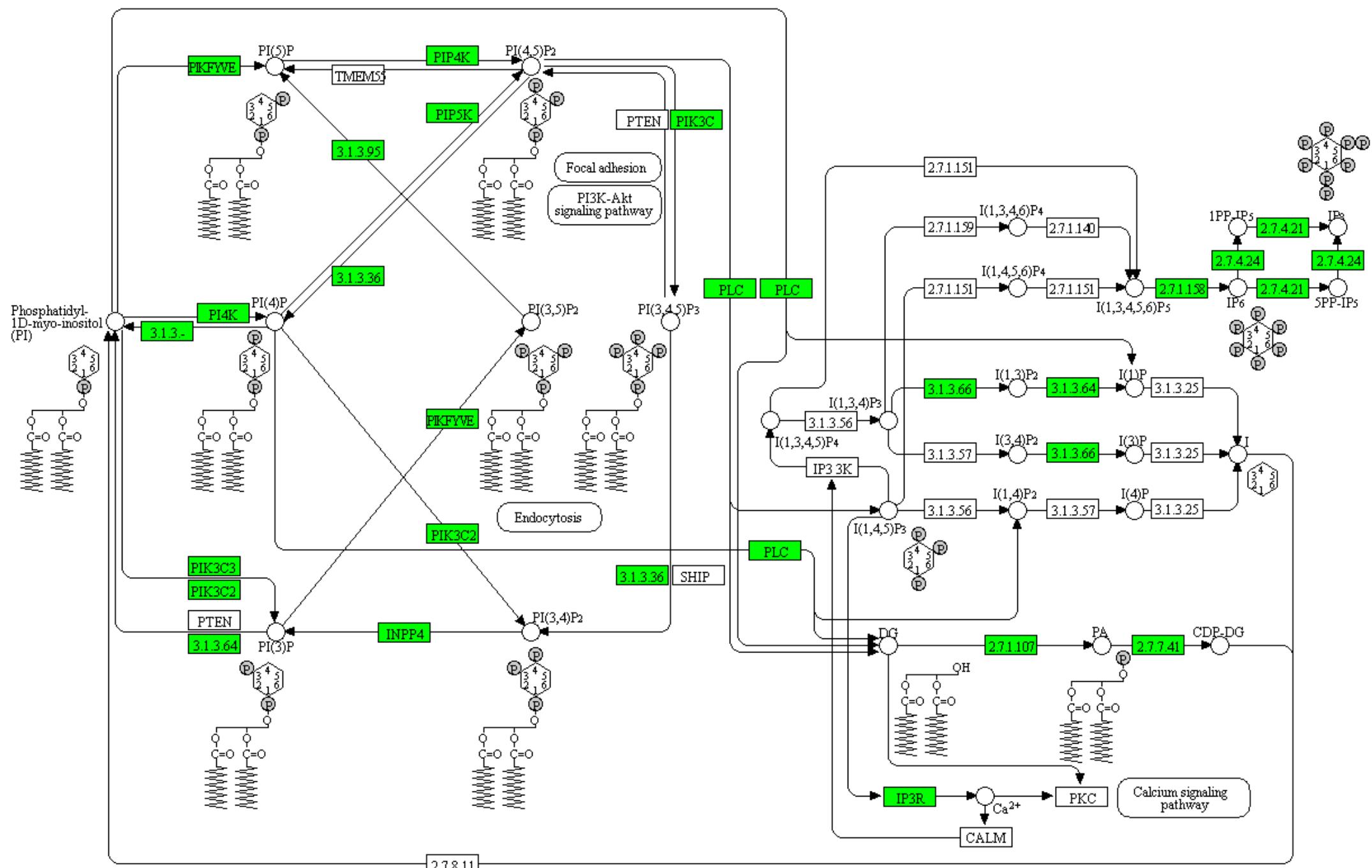


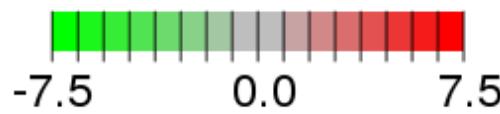
### NF-KAPPA B SIGNALING PATHWAY



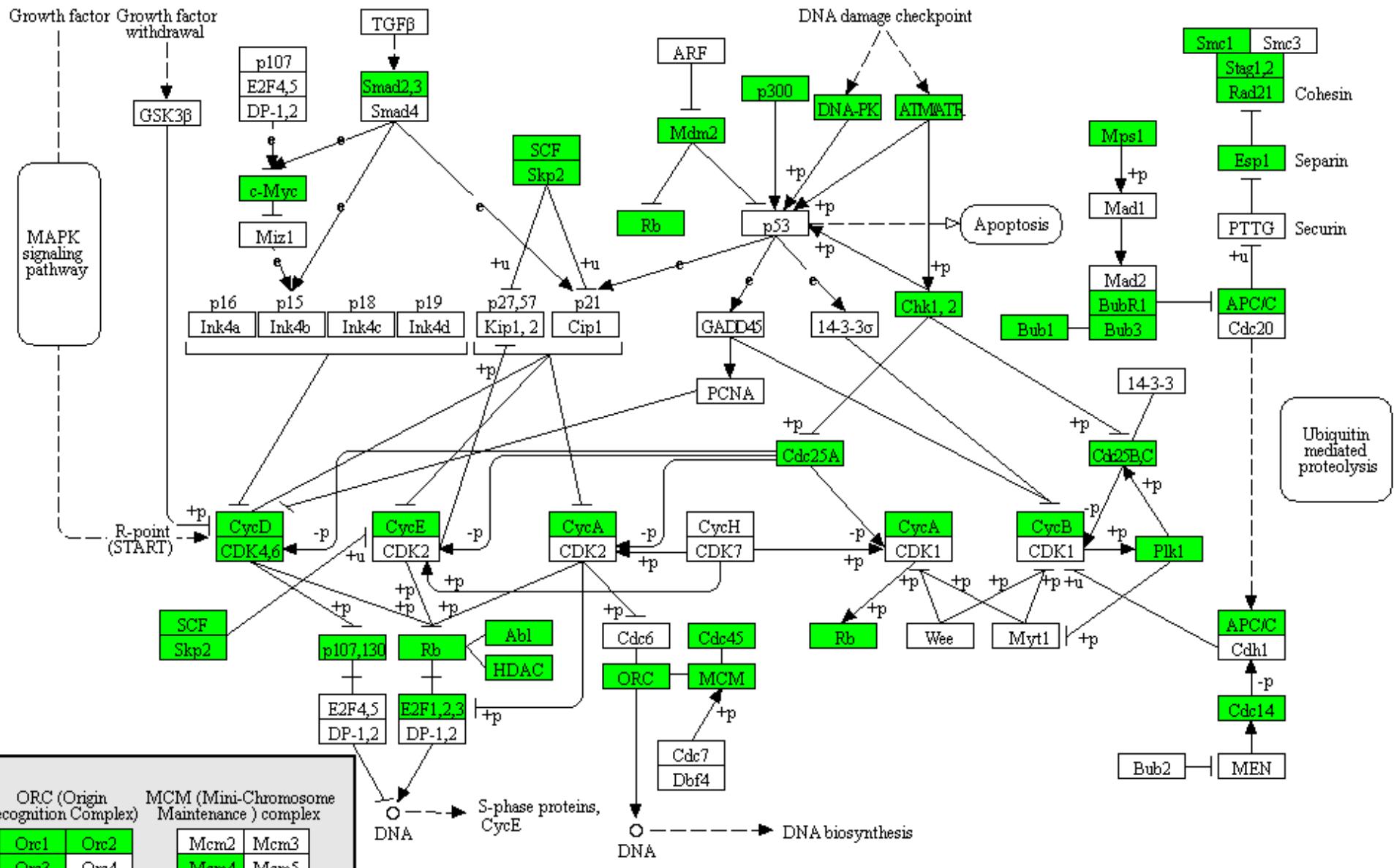


## PHOSPHATIDYLINOSITOL SIGNALING SYSTEM





## CELL CYCLE



ORC (Origin Recognition Complex)	MCM (Mini-Chromosome Maintenance) complex
Orc1 Orc2	Mcm2 Mcm3
Orc3 Orc4	Mcm4 Mcm5
Orc5 Orc6	Mcm6 Mcm7

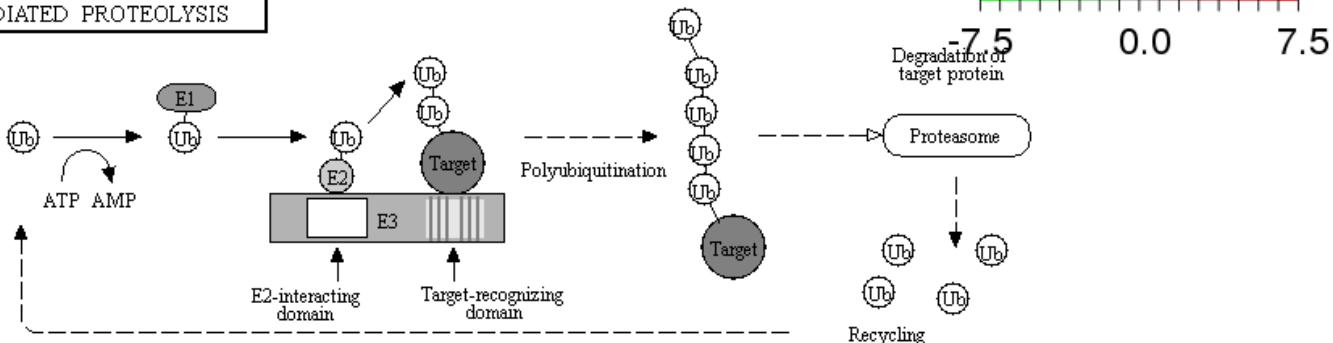
G1

S

G2

M

## UBIQUITIN MEDIATED PROTEOLYSIS



-7.5 0.0 7.5

**E1**  
(Ubiquitin-activating enzyme)

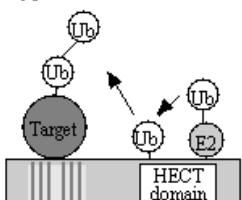
UBE1 UBLE1A UBLE1B UBE1C

**E2**  
(Ubiquitin-conjugating enzyme)

UBE2A	UBE2B	UBE2C	UBE2D	UBE2E	UBE2F	UBE2G1	UBE2G2	UBE2H
UBE2I	UBE2J1	UBE2J2	UBE2L3	UBE2L6	UBE2M	UBE2N	UBE2O	
UBE2Q	UBE2R	UBE2S	UBE2U	UBE2W	UBE2Z	HIP2	APC10N	

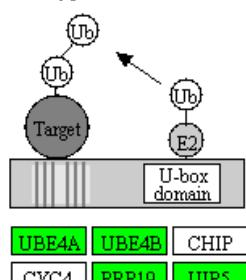
**E3**  
(Ubiquitin ligase)

HECT type E3



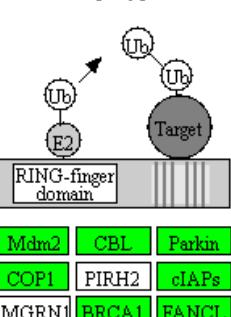
E6AP	UBE3B	UBE3C	Smurf	Itch
WWP1	WWP2	TRIP12	NEDD4	ARF-BP1
EDD1	HERC1	HERC2	HERC3	HERC4

U-box type E3



UBE4A	UBE4B	CHIP
CYC4	PRP19	UIP5

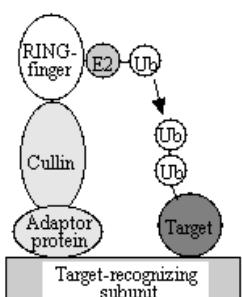
single RING-finger type E3



Mdm2	CBL	Parkin	SIAH-1	PML	TRAF6	MEKK1
COP1	PIRH2	cIAPs	PIAS	SYVN	NHLRC1	AIRE
MGRN1	BRCA1	FANCL	MID1	Trim32	Trim37	

multi subunit RING-finger type E3

Cullin-Rbx E3



RING finger	Cullin	Adaptor protein	Target recognizing subunit
RBX1	Cull	Skp1	F-box

ECV complex	RBX1	Cul2	EloB	VHLbox
			EloC	

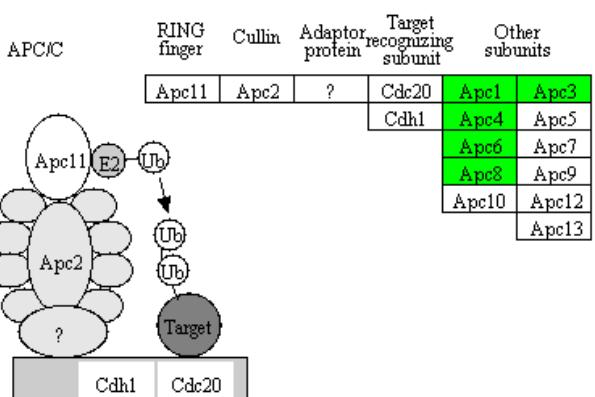
Cul3 complex	RBX1	Cul3		BTB
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Cul4 complex	RBX1	Cul4	DDB1	DCAF
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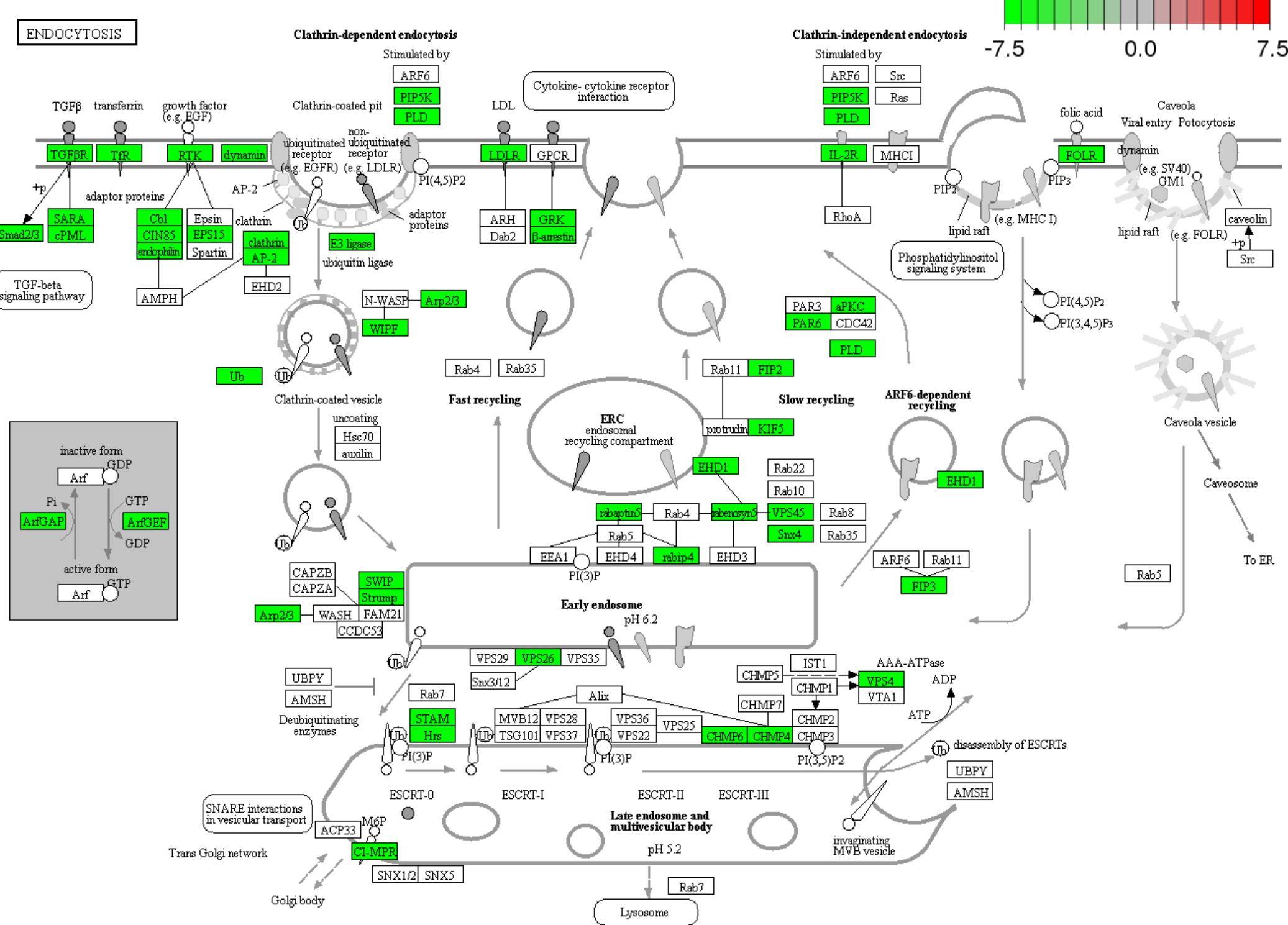
ECS complex	RBX2	Cul5	EloB	SCCSbox
			EloC	

Cul7 complex	RBX1	Cul7	Skp1	Fbxw8
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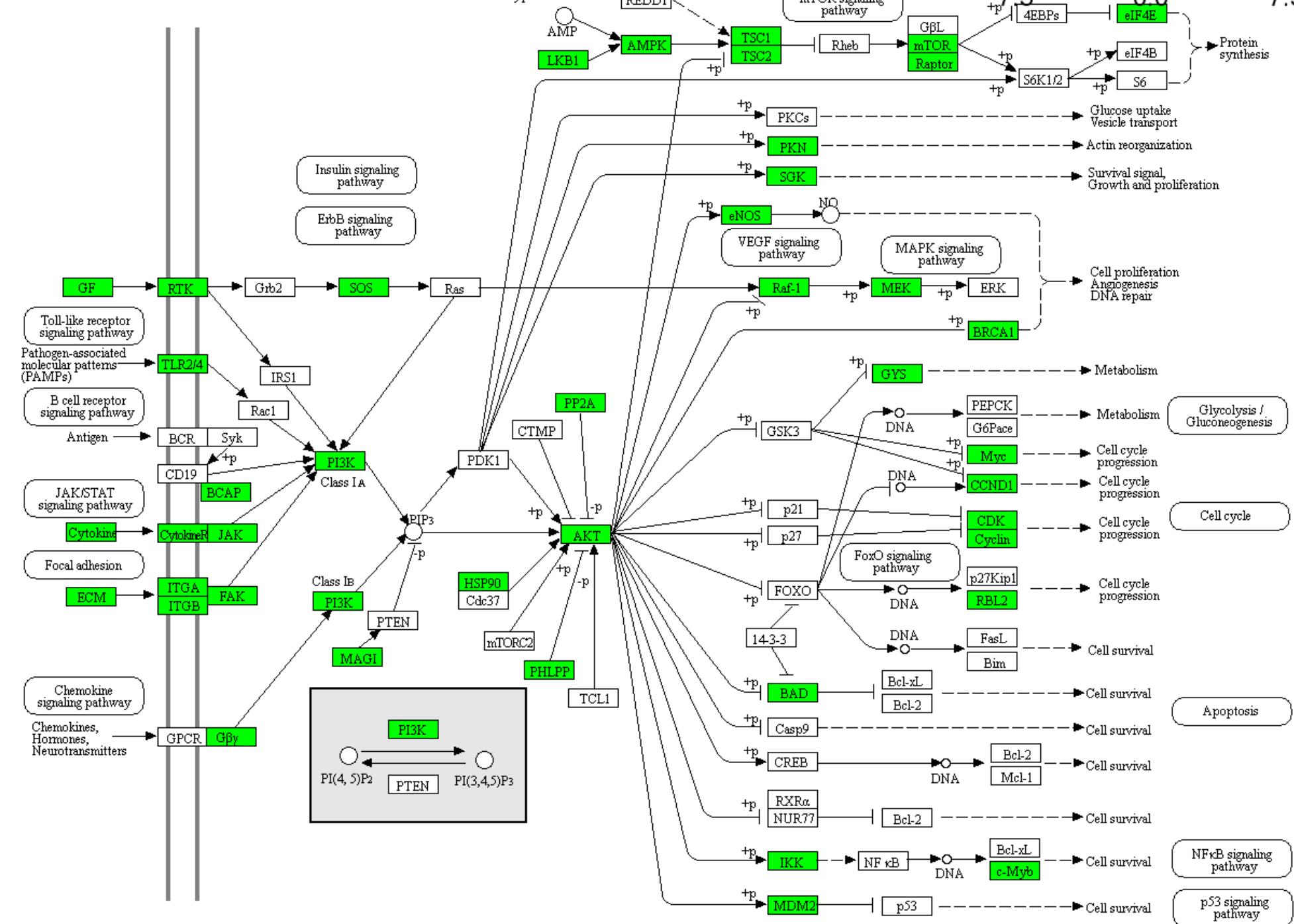
APC/C



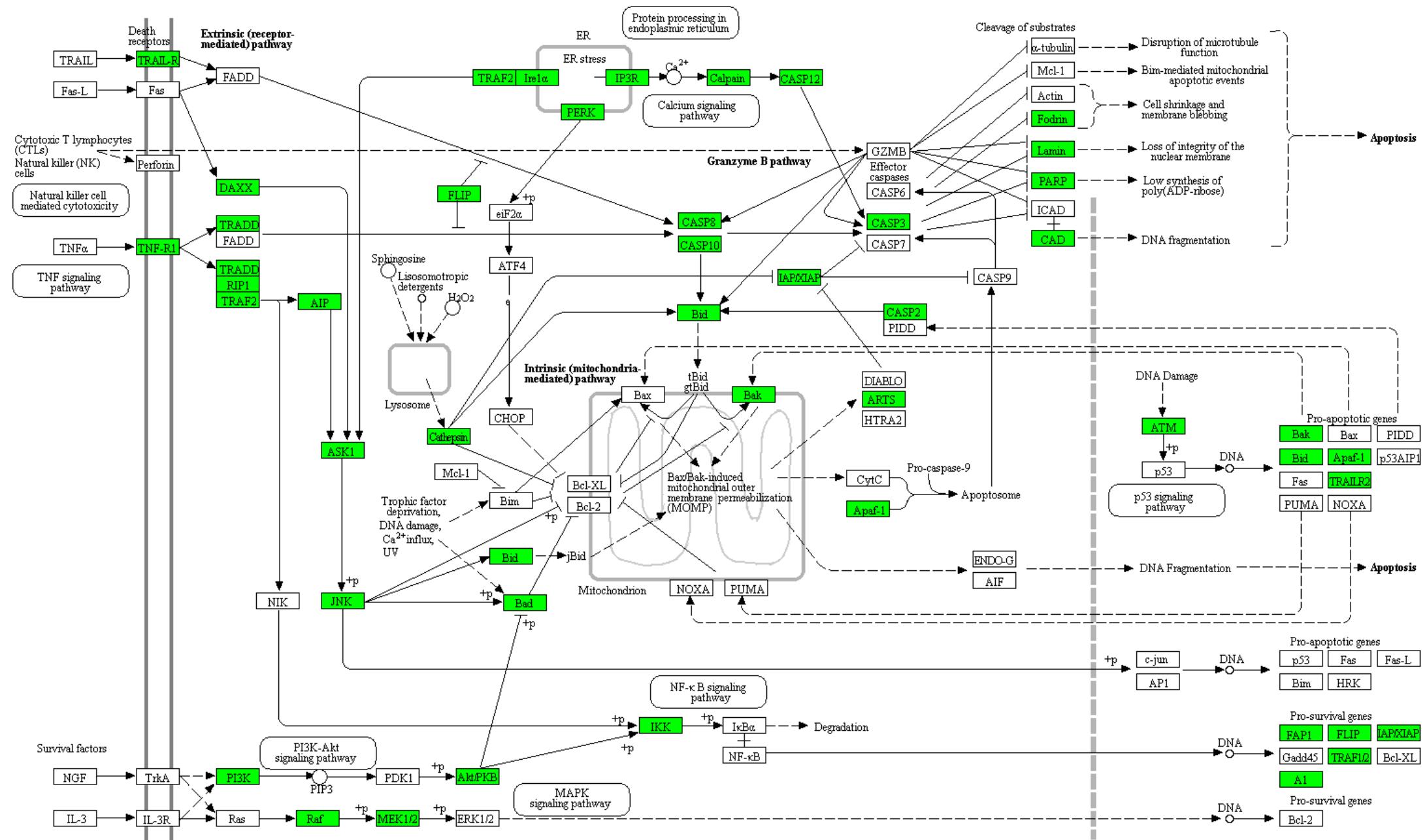
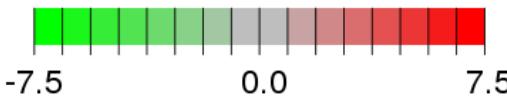
Apc11	Apc2	?	Cdc20	Apc1	Apc3
Cdh1				Apc4	Apc5
				Apc6	Apc7
				Apc8	Apc9
				Apc10	Apc12
					Apc13



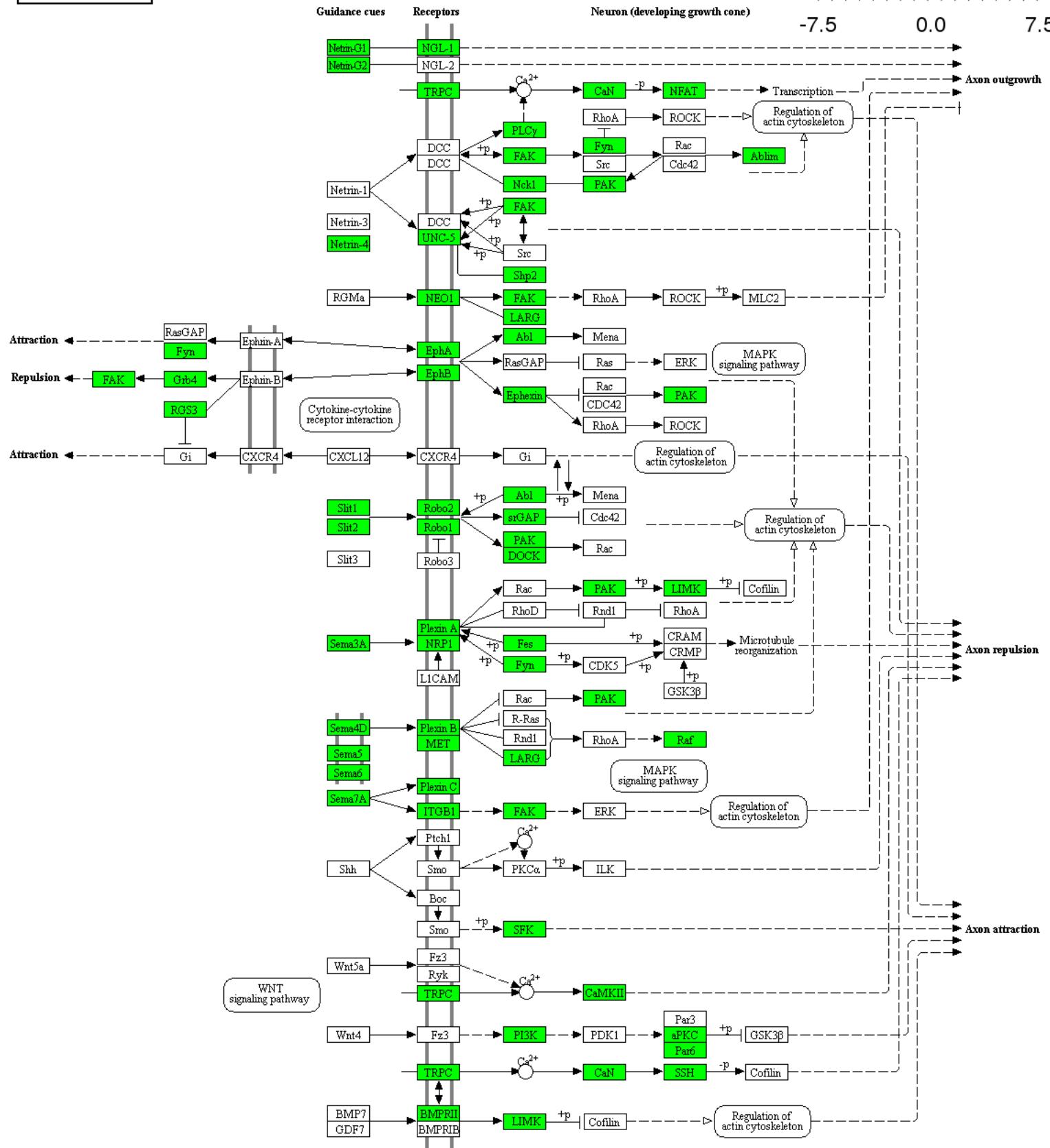
## PI3K-AKT SIGNALING PATHWAY

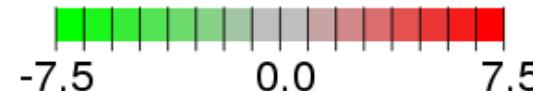


## APOPTOSIS

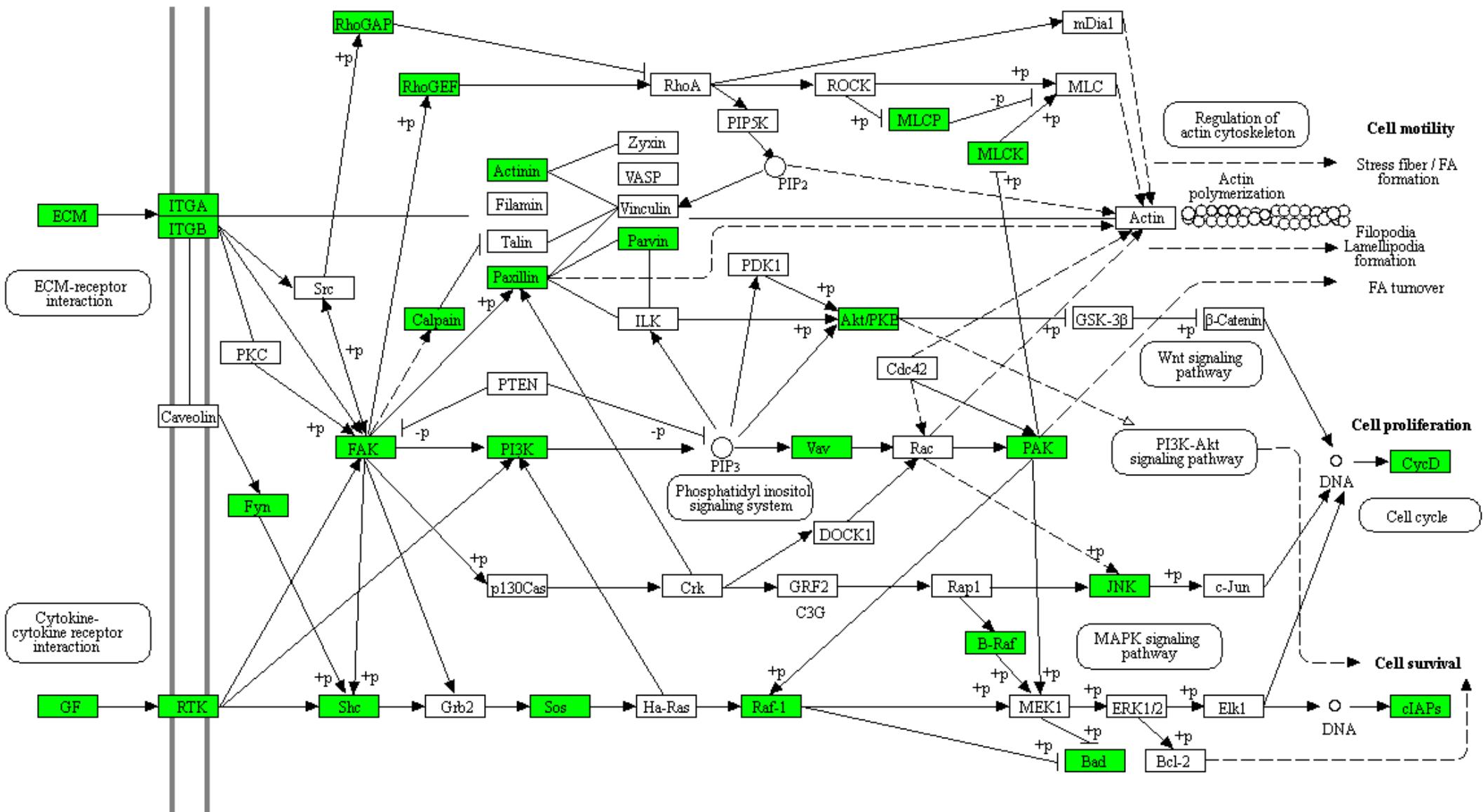


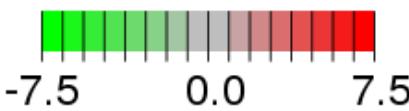
## AXON GUIDANCE



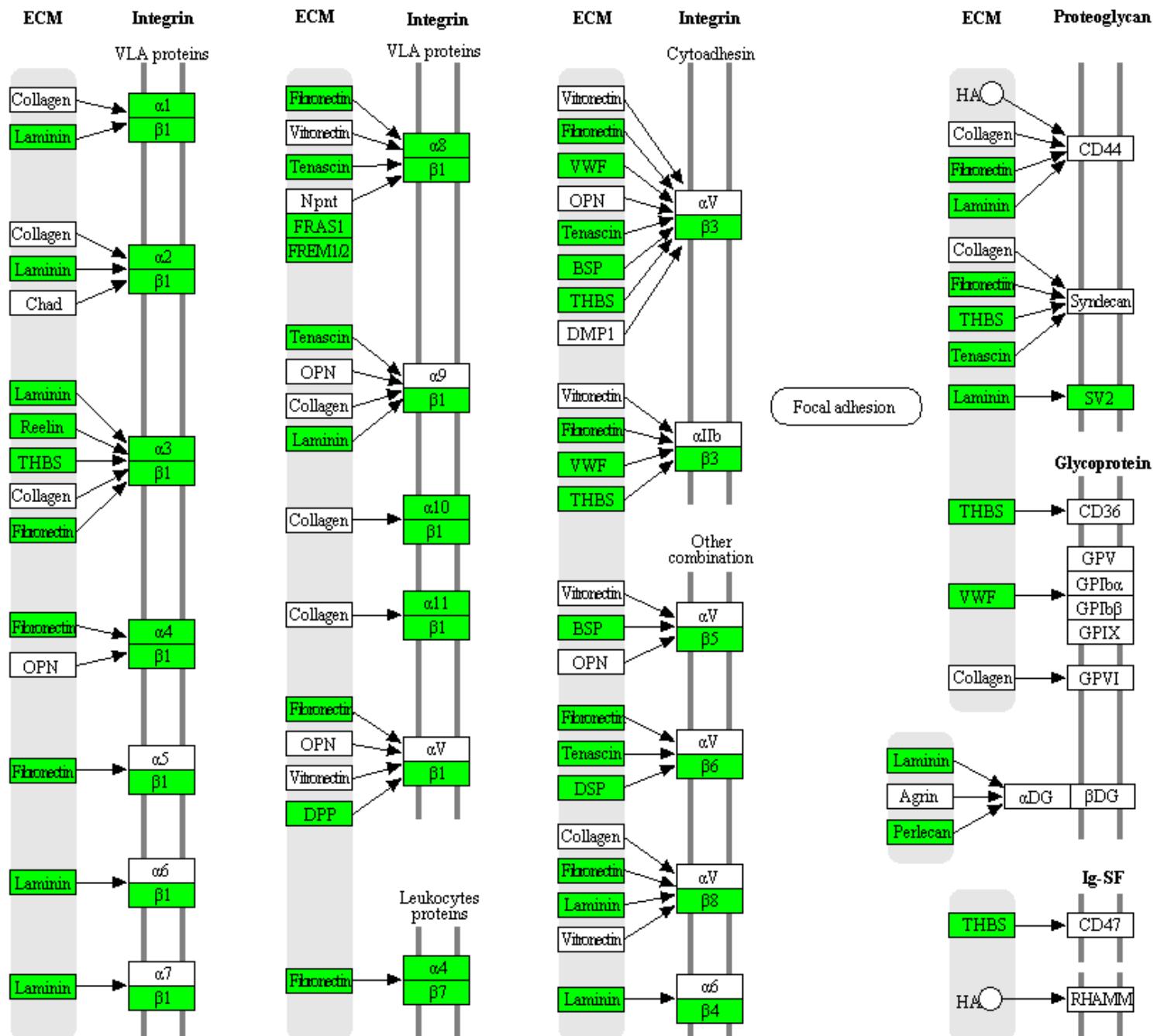


## FOCAL ADHESION

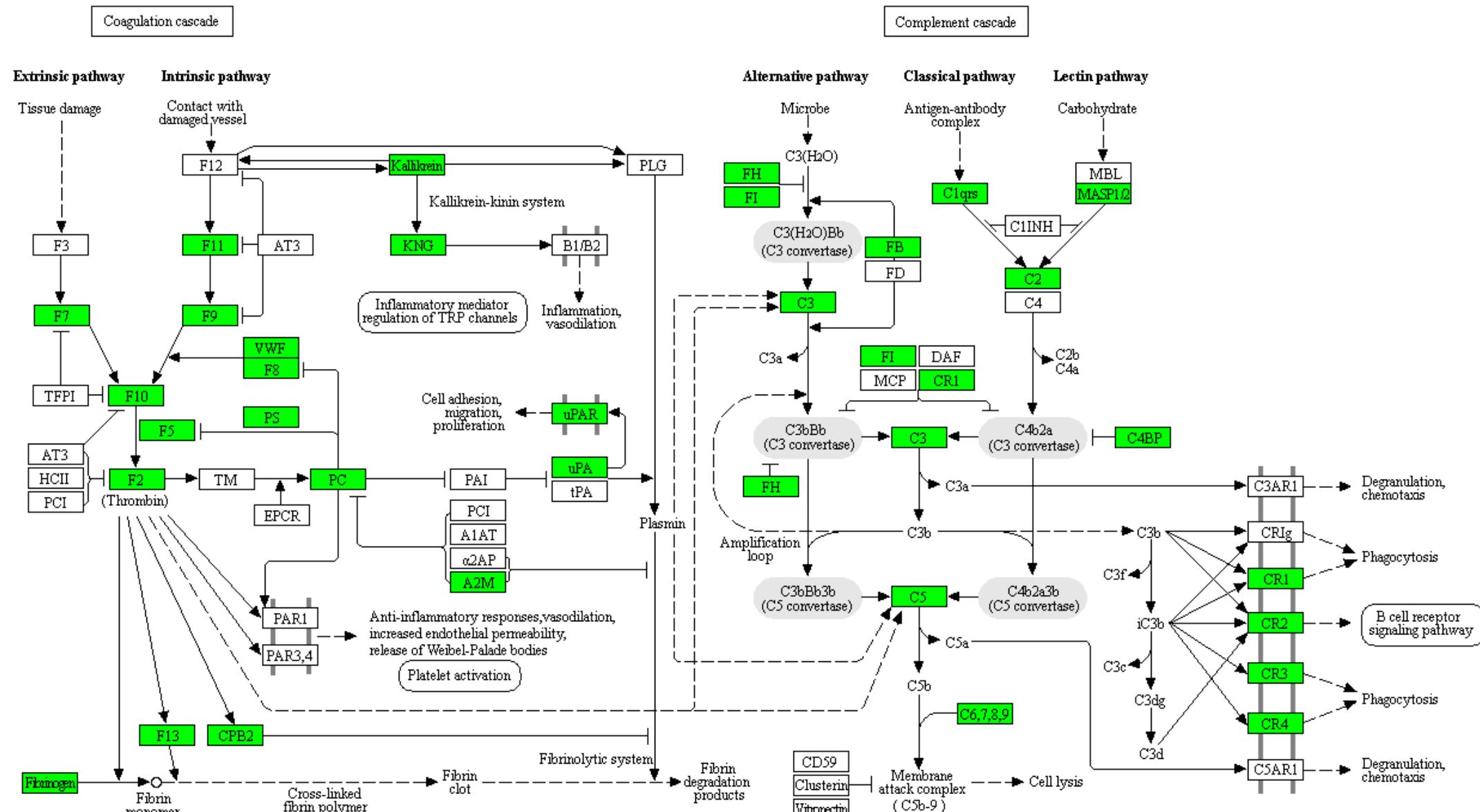
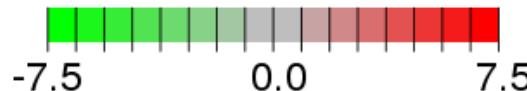


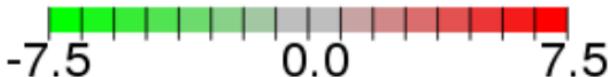


## ECM-RECEPTOR INTERACTION

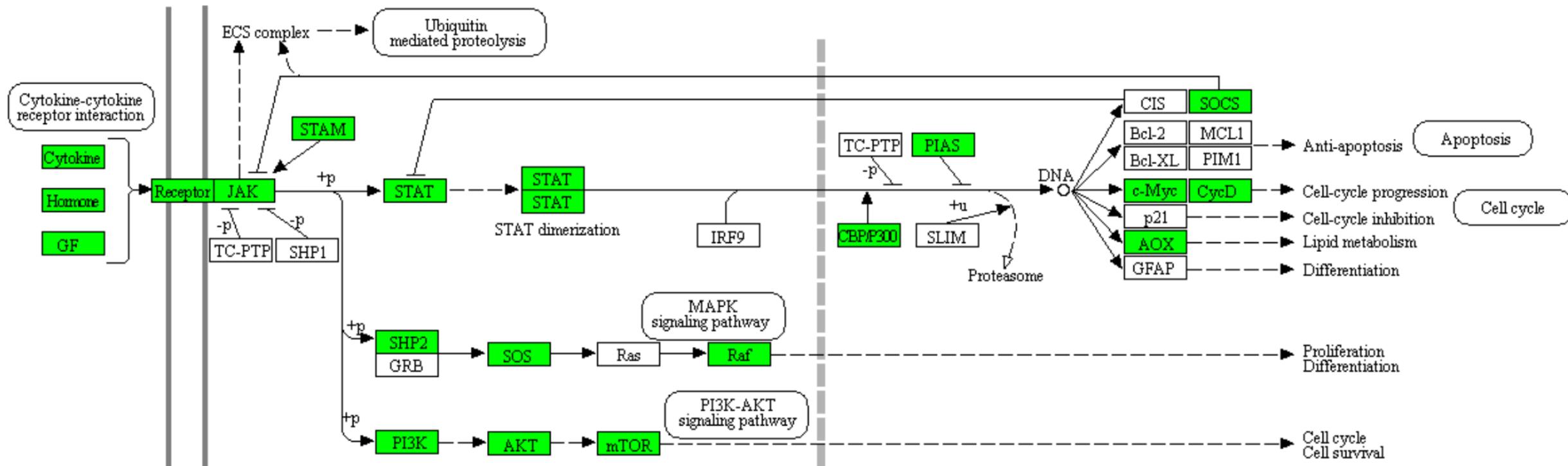


## COMPLEMENT AND COAGULATION CASCADES





## JAK-STAT SIGNALING PATHWAY



## INSULIN SIGNALING PATHWAY

