

Table 1 (supplemental) Functional categories of kinases and their substrates

Kinase	Kinase function	Target enriched function
Akt1	PROTEIN FATE (folding, modification, destination)	PROTEIN FATE (folding, modification, destination) p = 0.03
		CELLULAR TRANSPORT AND TRANSPORT MECHANISMS p = 0.04
		CELL RESCUE, DEFENSE AND VIRULENCE p = 0.05
		CONTROL OF CELLULAR ORGANIZATION p = 0.05
Atg1	CELLULAR TRANSPORT AND TRANSPORT MECHANISMS	TRANSCRIPTION p = 0.0001
	CELL FATE	CELL FATE p = 0.04
	PROTEIN FATE (folding, modification, destination)	
Cdc28-clb5	CELL FATE	CELL FATE p = 0.009
	CELL CYCLE AND DNA PROCESSING	CELL CYCLE AND DNA PROCESSING p = 0.006
Cdc5	CELL CYCLE AND DNA PROCESSING	REGULATION OF / INTERACTION WITH CELLULAR ENVIRONMENT p = 0.04
Cla4	CELL FATE	TRANSCRIPTION p = 0.01
	CELL CYCLE AND DNA PROCESSING	
	CONTROL OF CELLULAR ORGANIZATION	
Cmk1	CELLULAR COMMUNICATION/SIGNAL TRANSDUCTION MECHANISM	CELL RESCUE, DEFENSE AND VIRULENCE p = 0.01
	CELL FATE	
Fus3	CELL FATE	TRANSCRIPTION p = 0.009
	CELL CYCLE AND DNA PROCESSING	
	PROTEIN ACTIVITY REGULATION	
	REGULATION OF / INTERACTION WITH CELLULAR ENVIRONMENT	
Iks1	-	PROTEIN SYNTHESIS p = 0.03
Ire1	CELL RESCUE, DEFENSE AND VIRULENCE	CELL RESCUE, DEFENSE AND VIRULENCE p = 0.01
	CELLULAR COMMUNICATION/SIGNAL TRANSDUCTION MECHANISM	
	METABOLISM	
	CELL CYCLE AND DNA PROCESSING	

Ksp1	-	PROTEIN SYNTHESIS p = 0.01
		TRANSCRIPTION p = 0.01
Kss1	CELL FATE	TRANSCRIPTION P = 0.004
	REGULATION OF / INTERACTION WITH CELLULAR ENVIRONMENT	
Mck1	CELL FATE	TRANSPORT FACILITATION p = 0.03
	CELL CYCLE AND DNA PROCESSING	TRANSCRIPTION p = 0.05
Mek1	CELL CYCLE AND DNA PROCESSING	TRANSCRIPTION p = 0.01
		REGULATION OF / INTERACTION WITH CELLULAR ENVIRONMENT p = 0.03
		CELL FATE p = 0.03
Mkk1	CELL CYCLE AND DNA PROCESSING	CELL CYCLE AND DNA PROCESSING p = 0.03
	CELL RESCUE, DEFENSE AND VIRULENCE	
	CELL FATE	
Pho85-pcl1	TRANSCRIPTION	TRANSCRIPTION p = 0.03
	METABOLISM	
	ENERGY	
	CELL CYCLE AND DNA PROCESSING	
Pho85-pcl9	TRANSCRIPTION	
	METABOLISM	METABOLISM p = 0.02
	ENERGY	ENERGY p = 0.02
	CELL CYCLE AND DNA PROCESSING	
Pho85-Pho80	TRANSCRIPTION	
	METABOLISM	METABOLISM p = 0.0003
	ENERGY	ENERGY p = 0.05
	CELL CYCLE AND DNA PROCESSING	CELL CYCLE AND DNA PROCESSING p = 0.03
Prk1	CELL CYCLE AND DNA PROCESSING	TRANSCRIPTION p = 0.04
Rck1	CELL CYCLE AND DNA PROCESSING	TRANSCRIPTION p = 0.02
Rim11	TRANSCRIPTION	TRANSCRIPTION p = 0.03
	CELL CYCLE AND DNA PROCESSING	ENERGY p = 0.04
Sat4	CELL RESCUE, DEFENSE AND VIRULENCE	TRANSCRIPTION p = 0.02
Sks1	METABOLISM	REGULATION OF / INTERACTION WITH CELLULAR ENVIRONMENT p = 0.05

Sky1	-	TRANSCRIPTION p = 0.02
		CELL RESCUE, DEFENSE AND VIRULENCE p = 0.04
		PROTEIN FATE (folding, modification, destination) p = 0.05
Srf1	CELL RESCUE, DEFENSE AND VIRULENCE	CELL FATE p = 0.005
	METABOLISM	TRANSCRIPTION p = 0.01
Ste20	CELL FATE	CELL FATE p = 0.001
	CONTROL OF CELLULAR ORGANIZATION	CONTROL OF CELLULAR ORGANIZATION p = 0.02
	REGULATION OF / INTERACTION WITH CELLULAR ENVIRONMENT	CELL CYCLE AND DNA PROCESSING p = 0.036856
Swe1	CELL FATE && CELL CYCLE AND DNA PROCESSING	TRANSCRIPTION p = 0.0001
	CONTROL OF CELLULAR ORGANIZATION	
Tos3	-	CELL FATE p = 0.01
Tpk1	TRANSCRIPTION	TRANSCRIPTION p = 0.01
	CELLULAR COMMUNICATION/SIGNAL TRANSDUCTION MECHANISM	CELL RESCUE, DEFENSE AND VIRULENCE p = 0.03
		CELL FATE p = 0.04
Tpk2	TRANSCRIPTION	TRANSCRIPTION p = 0.02
	REGULATION OF / INTERACTION WITH CELLULAR ENVIRONMENT	CELLULAR COMMUNICATION/SIGNAL TRANSDUCTION MECHANISM p = 0.01
		CELL FATE p = 0.05
Tpk3	CELLULAR COMMUNICATION/SIGNAL TRANSDUCTION MECHANISM	CELLULAR COMMUNICATION/SIGNAL TRANSDUCTION MECHANISM p = 0.03
	TRANSCRIPTION	CELL RESCUE, DEFENSE AND VIRULENCE p = 0.02
Vhs1	CELL CYCLE AND DNA PROCESSING	TRANSCRIPTION p = 0.005
	&& PROTEIN FATE (folding, modification, destination)	METABOLISM p = 0.05
Yck1	CELLULAR TRANSPORT AND TRANSPORT MECHANISMS	TRANSCRIPTION p = 0.01
	CELL FATE	
	CELL RESCUE, DEFENSE AND VIRULENCE	
	CELL CYCLE AND DNA PROCESSING	

Yck2	CELLULAR TRANSPORT AND TRANSPORT MECHANISMS	CELLULAR COMMUNICATION/SIGNAL TRANSDUCTION MECHANISM p = 0.04
	CELL FATE	CELL FATE p = 0.004
	CELL RESCUE, DEFENSE AND VIRULENCE	
	CELL CYCLE AND DNA PROCESSING	
Ygl059w	-	CELL FATE p = 0.02
		CELLULAR COMMUNICATION/SIGNAL TRANSDUCTION MECHANISM p = 0.03
Yki171w	-	TRANSCRIPTION p = 0.02
Ypl141c	-	CELL FATE p = 0.006
Ypl150w	-	PROTEIN FATE (folding, modification, destination) p = 0.0007
		TRANSCRIPTION p = 0.05

Table 2 (supplemental) Known substrates of kinases identified in our assays

Kinase	Known Substrates Identified	Common Name
Aki1	Ylr206w	Ent2
Cdc28-Clb5	Ydr113c	Pds1
Fus3	Ydr480w	Dig2
Gin4	Ydl226w	Shs1
Hrr25	Ynl027w	Crz1
Pho85-Pho80	Yfr034c	Pho4
Snf1	Ygl208w Ygl035c	Sip2 Mig1
Tos3	Ygl208w Ygl035c	Sip2 Mig1 Snf1
Tpk1	Yal038w Yil033c Ylr133w	Cdc19 Bcy1 Cki1
Tpk2	Yjl141c	Yak1