

Protein-Ser/Thr Kinase Consensus Phosphorylation Site Specificity

Protein Kinase	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5
CLK1	.	KR	.	KR	.	KR	.	pSpT	.	.	R	.	.
PKC-eta	A	R	.	.	R	KR	R	pSpT	F	R	R	.	.
PKC-alpha	.	R	RF	R	R	KR	G	pSpT	FL	KR	KRQ	.	.
PKA	.	.	.	KR	KR	KR	RN	pSpT	FILVY	I	F	D	.
Akt/PKB	.	.	R	.	R	STA	STA	pSpT	FL	.	.	.	.
PKC-delta	.	.	R	.	R	K	G	pSpT	F	.	.	.	.
PKC-gamma	.	.	R	R	R	K	KG	pSpT	F	KR	KR	K	A
DMPK-E	.	.	KR	K	R	R	R	pSpT	LV	.	.	.	.
Pim1	.	.	KR	KR	R	KR	L	pSpT	.	.	.	.	.
RSK1	.	.	KR	.	R	R	.	pSpT	.	.	.	.	.
PKC-epsilon	.	.	.	K	R	KRQ	G	pSpT	V	R	R	.	.
SLK1	.	.	R	R	R	F	G	pS	FILVY	R	R	FILVY	.
ZIPK	.	.	.	KR	R	R	R	pS	.	.	.	.	.
NIMA	.	.	.	NR	FLM	KR	KR	pS	IVMR	IVMR	FIMV	FIM	.
PKC-beta	.	.	FL	KR	R	KQ	G	pSpT	FM	K	K	.	A
AMPK	.	.	ILMV	HKR	HKR	HKR	.	pSpT	.	.	.	ILMV	.
DCK1-b2	.	.	FILMV	R	R	.	.	pSpT	FILMV	.	.	.	.
MAPKAPK2	FIL	.	ILV	.	R	.	L	pT	ILMV	.	.	.	.
CHK1	.	.	ILMV	.	KR	.	.	pSpT	.	.	.	.	.
CaMK1	.	.	FILMV	.	R	.	.	pSpT	FILMV	.	.	.	.
CaMK2	.	.	FILVY	.	KR	.	.	pSpT	ILMV	DE	.	.	.
CaMK4	.	.	FILVY	.	R	.	.	pSpT	.	.	.	.	.
PKC-zeta	.	.	F	.	R	.	.	pSpT	FM	FM	.	.	.
PKC-mu	.	.	VL	ALV	R	.	M	pSpT	.	.	.	.	.
MSK1/2	R	.	.	pSpT	.	.	.	.	.
PAK	KR	R	.	pSpT	.	.	.	.	.
Phos.Kinase	KR	.	FILM	pS	FILMV	FKR	IL	FIL	.
PDK1	.	.	F	.	.	.	F	pSpT	FY	.	.	.	.
LKB1	L	.	pT	.	.	.	.	.
mTOR	F	pT	Y	.	.	.	.
MEK3	pT	G	Y	.	.	.
CK1d	.	.	E	EF	DpS	AGT	G	pS	I	FGIY	GFI	FG	FLP
CK1g	.	.	Y	EY	DYpS	AD	AG	pS	I	FGIY	GFI	FG	FLP
BARK	E	.	pS	.	.	.	.	.
ATM	ILMP	.	DE	pS	Q	E	.	.	.
DNAPK	E	.	pS	Q	E	.	.	.
SIM	pT	E	Y	.	.	.
CK2	pSpT	.	DE	DEpS	DE	.
ERK1	P	.	pSpT	P	.	.	FIY	.
p38 MAPK	G	P	QM	pS	P	I	.	.	.
CDK2	.	R	.	.	.	P	M	pSpT	P	.	KR	K	.
CDK4	P	L	pSpT	P	I	P	HKR	.
CDK5	P	.	pSpT	P	.	K	.	.
CDK1	KR	pS	P	KR	KR	.	.
GSK3	pS	.	.	.	pS	P
TGF-betaR1	pS	S	.	pS	.	.

Acidic	DE	Asp/Glu
Basic	KR	Lys/Arg
Weak Basic	NQ	Asn/Gln
Weak polar	M	Met
Hydrophobic	FILVY	Phe/Ile/Leu/Val/Tyr
Kink	P	Pro
Polar	ST	Ser/Thr
Phospho-AA	pSpT	pSer/pThr
Phospho-AA	pY	pTyr
Neutral	AG	Ala/Gly
Any AA	.	Variable



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