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SUPPLEMENTARY MATERIAL

corresponding to:

A screen of kinase inhibitors reveals a potential role of Chk1 in regulating *Hydra* head regeneration and maintenance

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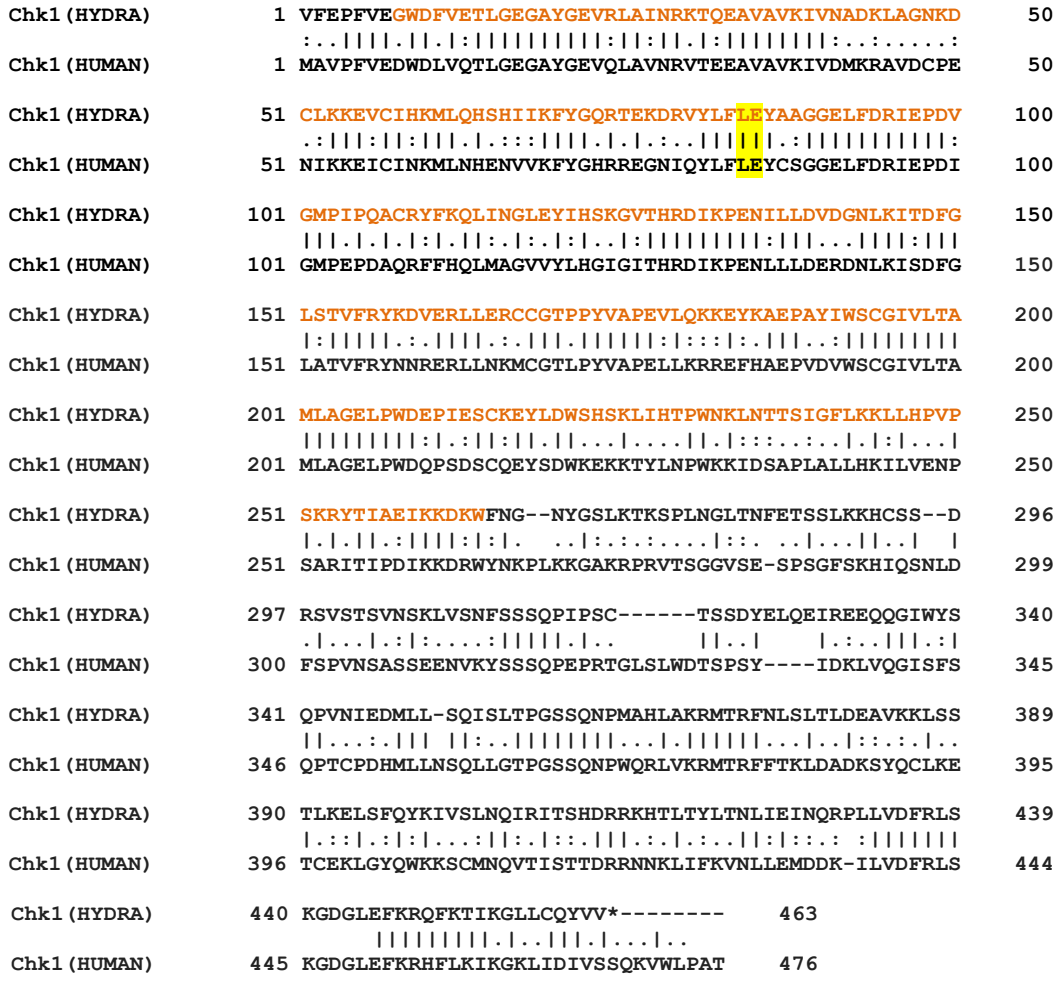

Fig. S1. Global pairwise alignment of Chk1 (*Hydra*) and Chk1 (Human) amino acid sequences. *A global pairwise alignment of Chk1 (*H. vulgaris*) and Chk1 (Human) amino acid sequences was performed using EMBOSS Needle. The catalytic domain and critical residues of the ATP binding pocket are represented by orange and yellow, respectively.*

TABLE S1

ORGANIZATION OF THE 80 KINASE INHIBITORS BY THEIR TARGET SIGNAL TRANSDUCTION PATHWAY

Signal Transduction Pathway	Target Kinase	Cat. No.	Product Name
Cell Cycle Regulation	CDK	1937	NSC 693868
	CDK	2072	Aminopurvalanol A
	CDK	2457	Arcyriaflavin A
	CDK	1284	Olomoucine
	CDK	1580	Purvalanol A
	CDK	1581	Purvalanol B
	CDK	2609	Ryuvidine
	Aurora	2458	ZM 447439
	PLK	2977	GW 843682X
MAPK/ERK	P38 MAPK	1962	SB 239063
	P38 MAPK	1264	SB 202190
	P38 MAPK	1402	SB 203580 hydrochloride
	P38 MAPK	2908	EO 1428
	MEK	1213	PD 98059
	MEK	1969	SL 327
	MEK	1144	U0126
	MEK	2605	PD 198306
	MEK	1777	Arctigenin
	Mnk1	2731	CGP 57380
	Raf	1321	ZM 336372
	Raf	1381	GW 5074
DAG-PKC	PKC	0741	GF 109203X
	PKC	2002	Ro 31-8220 mesylate
	PKC	2442	CGP 53353
JAK/STAT	JAK3	1366	ZM 449829
	JAK3	1367	ZM 39923 hydrochloride
	JAK2	2291	1,2,3,4,5,6-Hexabromocyclohexane
NF-κB	IKK	2539	IKK 16
	IKK	2559	TPCA-1
	IKK	2611	IMD 0354
	IKK	3318	SC 514
ROCK/MLCK	MLCK	0431	ML 9 hydrochloride
	ROCK	0541	Fasudil hydrochloride
	ROCK	1254	Fasudil hydrochloride
	ROCK	2415	HA 1100 hydrochloride
TGF-β	TGFbR1	1614	SB 431542
	TGFbR1	2718	LY 364947
	TGFbR1	3269	SD 208
SRF	Src	1397	PP 1
	Src	1407	PP 2
	Src	3063	1-Naphthyl PP1
DDR	Chk1	2560	SB 218078
	Chk1	2694	PD 407824
	ATR/ATM	2639	CGK 733
	ATM	3544	KU 55933
	DNA-PK	2828	NU 7026
	DNA-PK	3271	Compound 401
EGFR	EGFR	0414	AG 490
	EGFR	1110	Genistein
	EGFR	2239	GW 583340 dihydrochloride
	EGFR	2416	BIBX 1382 dihydrochloride
	EGFR	3000	Iressa
PI3K-AKT/PKB	PKB	2926	FPA 124
	PKB	2151	API-2
	PKB	2558	10-DEBC hydrochloride
	FLT3	2591	TCS 359
	PI3K	2814	PI 828
	PI3K	1130	LY 294002 hydrochloride
	SGK	3572	GSK 650394
VEGF	VEGFR	1459	SU 4312
	VEGFR	2475	ZM 323881 hydrochloride
	VEGFR	2499	ZM 306416 hydrochloride
	VEGFR	2542	KI 8751
	VEGFR	3037	SU 5416
Wnt	GSK-3	1616	SB 216763
	GSK-3	1617	SB 415286
	GSK-3	3194	BIO
	CK1	2902	D 4476
	CK2	3194	TBB
BCR	BKT	1300	LFM-A13
	BKT	1405	(-)-Terreic acid
cAMP	PKA	2910	H 89 dihydrochloride
	CaM Kinase III	3439	NH 125
FcεRI	Syk	2417	ER 27319 maleate
HGF/cMET	cMET	2693	PHA 665752
IGF-1R	IGF-1R	2768	PQ 401
JNK/SAPK	JNK	1496	SP 600125
	JNK	3314	BI 78D3
NGF	TrkA	2238	GW 441756
	TrkA	2272	Ro 08-2750

Column 1 is the signal transduction pathways targeted by the kinase inhibitors; column 2 is the main target kinase within the signaling pathway; column 3 is the catalogue number (Cat. No.); column 4 is the product name of the kinase inhibitor. Abbreviations for signal transduction pathways: MAPK/ERK = mitogen-activated protein kinase/extracellular signal–regulated kinase, DAG-PKC = diacylglycerol-protein kinase C, JAK/STAT = Janus kinase/signal transducers and activators of transcription, NF-κB = nuclear factor kappa-light-chain-enhancer of activated B cells, ROCK/MLCK = Rho-associated kinase/myosin light chain kinase, TGF-β = transforming growth factor-β, SRF = serum response factor, DDR = DNA damage response, EGFR = epidermal growth factor receptor, PI3K-PKB = phosphoinositide-3-kinase–protein kinase B, VEGF = vascular endothelial growth factor, BCR = B cell antigen receptor, FcεRI = high affinity IgE receptor, HGF/cMET = hepatocyte growth factor, IGF-1R = insulin-like growth factor 1, JNK/SAPK = c-Jun NH2-terminal kinase/stress-activated protein kinase, NGF = nerve growth factor. Abbreviations for target kinases: Cdk = cyclin-dependent kinase, PLK = polo-like kinase, P38 MAPK = P38 mitogen-activated protein kinase, MEK = mitogen-activated protein kinase kinase, Mnk1 = MAP kinase-interacting serine/threonine-protein kinase 1, JAK3 = Janus kinase 3, JAK2 = Janus kinase 2, IKK = IκB kinase, TGFbR1 = transforming growth factor-beta receptor type 1, ATM = ataxia-telangiectasia, mutated, ATR = ATM and Rad3-related, DNA-PK = DNA-dependent protein kinase, FLT3 = fms like tyrosine kinase 3, SGK = serum- and glucocorticoid-inducible protein kinase, VEGFR = vascular endothelial growth factor receptor, GSK-3 = glycogen synthase kinase 3, CK1 = casein kinase 1, CK2 = casein kinase 2, BKT = Bruton's tyrosine kinase, PKA = protein kinase A, Syk = spleen tyrosine kinase, TrkA = tropomyosin receptor kinase A.