

The List of Kinases at Creative BioStructure

Creative BioStructure has extensive experience in co-crystallization of a large number of protein kinases with small molecule compounds. Below please see the list of kinases we have been working on.

List of Protein Kinases at Creative BioStructure							
Gene Symbol	cDNA length [bp]	Gene Symbol	cDNA length [bp]	Gene Symbol	cDNA length [bp]	Gene Symbol	cDNA length [bp]
BMX	412-675	APEG1	342	EEF2K	2178	ADCK4	1635
p38-beta	full length	STK10	435	TLK1	2301	FASTK	1650
p38-delta	full length	STK32A	501	FES	2469	MARK3	2190
mkk6	full length	ADCK5	510	MKNK2	477	STK4	120
Erk2	full length	PDGFRA	657	MLKL	792	MASK	414
PRAK	full length	PRKACB	774	CSNK1G1	924	STK40	702
MKK1	full length	TSSK6	822	BCKDK	1008	CCRK	828
PTK9L	1050	CDC2	894	PDIK1L	1026	STK16	918
CDK9	1119	CDK2	897	MAPK13	1098	MAPK12	1104
MAP2K2	1203	CDK4	912	TSSK1	1104	STK32C	1110
PDK3	1221	PIM2	936	PHKG2	1221	STK17B	1119
CSNK1G2	1248	NEK6	942	PDK4	1236	ACVR1B	1518
STK25	1281	PBK	969	RET	1377	NRBP	1608
SGK	1296	CDC2L5	975	IRAK4	1383	PRKCZ	1779
PCTK1	1347	ERBB3	996	AKT1	1443	ARAF	1821
ZAK	1368	MAP2K6	1005	CLK3	1473	EIF2AK1	1893
PCTK3	1419	CSNK1A1L	1014	CAMKV	1506	SRPK1	1968
CLK3	1473	TRIB2	1032	ADCK4	1512	SRPK2	2067
RPS6KA5	1650	CDK7	1041	MATK	1524	MAPK15	834
RIOK1	1707	PRKD3	1836	HIPK4	1851	EPHA7	840
MAP3K3	273	CDK5	879	TSSK3	807	ICK	879
EPHA4	318						

Note: For the green-colored ones, soluble proteins are available.

Notes:

- Since most protein kinases of public interest have their structures resolved or have a homologous structure available, it is much easier to express a kinase in a soluble functional form [or refold it into such a form] in comparison with novel proteins.
- Also, we may follow [or refer to] the published conditions to grow the crystals, the most challenging step in x-ray crystallography.
- Most importantly, if structure of a homologous kinase is available in the RCSB Protein Data Bank (<http://www.rcsb.org/pdb/home/home.do>), the kinase-compound structure can be determined by one good set of diffraction data with Molecular Replacement (MR) method.
- In contrast, if a homologous model is not available, phase problem has to be determined by either Multiple Isomorphous Replacement (MIR) using heavy atoms or Multiple Wavelength Anomalous Dispersion (MAD) using selenomethionine derivatives. Depending on the phasing methods, more than one data set is collected.