

**Supplementary Table S4.** The reactions' conditions used in the *in vitro* kinase inhibition assay. The reactions were performed in a final volume of 25  $\mu$ L with 30  $\mu$ M ATP.

<b>Kinase</b> [ng/reaction]	<b>Substrate</b> [concentration]	<b>Temperature and</b> <b>time of reaction</b>	<b>Other reagents</b>
<b>TNIK</b> [0.5 ng]	LRRKtide [5 $\mu$ M]	25°C, 1 hour	20 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2 mM DTT
<b>ALK</b> [2.5 ng]	IGF-1Rtide [60 $\mu$ M]	30°C, 2 hours	50 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.25 mM EGTA 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2.5 mM DTT
<b>AURA</b> [1.6 ng]	Kemptide [30 $\mu$ M]	25°C, 1 hour	50 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.25 mM EGTA 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2.5 mM DTT
<b>BTK</b> [2.5 ng]	Srctide [30 $\mu$ M]	25°C, 1 hour	20 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2 mM DTT
<b>EGFR</b> [7.0 ng]	Srctide [60 $\mu$ M]	25°C, 1 hour	50 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.25 mM EGTA 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2.5 mM DTT
<b>FGFR1</b>	IGF-1Rtide	30°C, 1 hour	20 mM Tris, pH 7.5

[2.5 ng]	[60 $\mu$ M]		10 mM MgCl <sub>2</sub> 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2 mM DTT
<b>FGFR2</b> [2.0 ng]	IGF-1Rtide [30 $\mu$ M]	25°C, 1 hour	20 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2 mM DTT
<b>FLT3</b> [1.0 ng]	Srctide [20 $\mu$ M]	25°C, 1 hour	50 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.25 mM EGTA 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2.5 mM DTT
<b>GSK3</b> [1.0 ng]	GSM [10 $\mu$ M]	33°C, 1.5 hour	50 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.25 mM EGTA 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2.5 mM DTT
<b>JAK2</b> [0.5 ng]	IGF-1Rtide [10 $\mu$ M]	25°C, 1 hour	50 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.25 mM EGTA 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2.5 mM DTT
<b>KDR</b> [2.5 ng]	Srctide [30 $\mu$ M]	25°C, 1 hour	20 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2 mM DTT

<b>PDGFR<math>\beta</math></b> [2.5 ng]	Src tide [30 $\mu$ M]	25°C, 1 hour	20 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2 mM DTT
<b>PI3K<math>\alpha</math></b> [10 ng]	PIP <sub>2</sub> [50 $\mu$ M]	25°C, 1 hour	50 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.25 mM EGTA 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2.5 mM DTT
<b>PIM1</b> [5 ng]	S6K [30 $\mu$ M]	25°C, 1 hour	50 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.25 mM EGTA 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2.5 mM DTT
<b>SYK</b> [2.5 ng]	Src tide [40 $\mu$ M]	25°C, 1 hour	50 mM Tris, pH 7.5 10 mM MgCl <sub>2</sub> 0.25 mM EGTA 0.1 mM Na <sub>3</sub> VO <sub>4</sub> 0.01% Triton X-100 2.5 mM DTT