

## **Supplementary file 4**

Substrate	<sup>3</sup> H Hyp assay	IVTT MSMS Hydroxylation assay		Peptide MS Hydroxylation assay	
	Replicate #	Target Residue	Replicate #	Peptide Name	Replicate #
ACACB	2	P343	2	NT	-
		P450	2	ACACB/438-462	1
ACTB	2	P307	2	ACACB/445-462	1
		P322	2	ACTB/295-319	3
ADRB2	1	P382	1	ACTB/310-334	3
		P395	1	ADRB2/370-394	3
AKT1		P125	2	ADRB2/383-407	3
		P313, P318	2	AKT1/113-137	3
				AKT1/115-134	3
				AKT1/301-325	3
				AKT1/307-328	3
P423	2	AKT1/311-330	3		
ATF4	2	P156, P162, P164, P167	1	NT	-
		P174	1	ATF4/144-168	3
CENPN/iso1	2	P311	1	ATF4/157-182	3
				CENPN/299-323_iso1	1
				CENPN/299-323_iso3	1
CEP192	2	P2313	1	CENPN/308-317_iso3	1
				CEP192/2303-2326	3
EEF2K	2	P98	2	CEP192/2306-2317	3
EPOR	2	P443, P450	2	EEF2K/86-110	3
				EPOR/434-458	3
FLNA	2	P2317, P2324	1	EPOR/441-455	3
FOXO3	2	P426, P437	2	FLNA/P2310-2333	3
				FOXO3/414-438	3
IKBKB	2	P191	1	FOXO3/425-448	3
				IKBKB/180-204	3
MAPK6	2	P25	1	MAPK6/13-37	1
NDRG3	2	P294	2	NDRG3/282-306	3
PDE4D	2	P19	-	PDE4D/17-41	3
		P381	1	PDE4D/370-394	3
		P419	1	PDE4D/407-431	3
PKM	1	P403, P408	1	PKM/391-415	3
				PKM/396-422	3
PPP2R2A	2	P319	1	PPP2R2A/308-332	1
				PPP2R2A/311-329	1
POLR2A	NT	P1465	NT	POLR2A/1456-1476	3
SPRY2	2	P18, P144, P160	1	SPRY2/6-30	3
				SPRY2/132-156	3
				SPRY2/148-172	3
TELO2	1	P374	1	TELO2/362-386	3
		P419, P422	-	TELO2/409-433	3
THRA	2	P160, P162	2	THRA/149-173	1
TP53	2	P142	1	NT	-
		P359	1	TP53/347-371	1
TRPA1	1	P394	1	TRPA1/382-406	3
				TRPA1/386-405	3