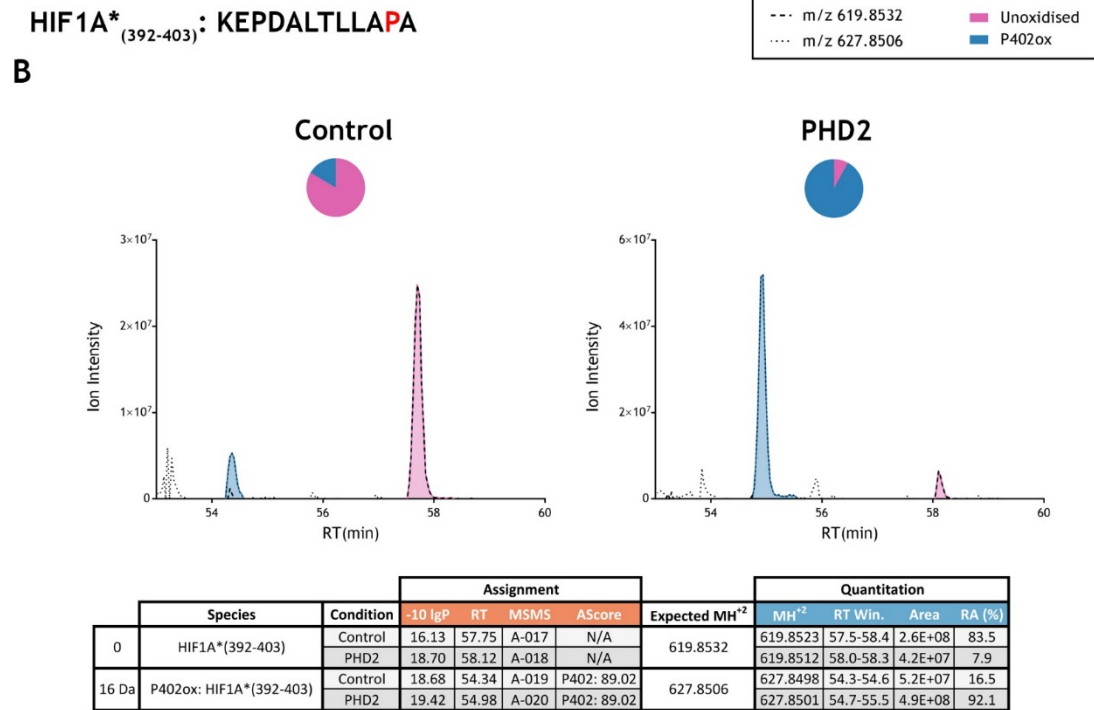
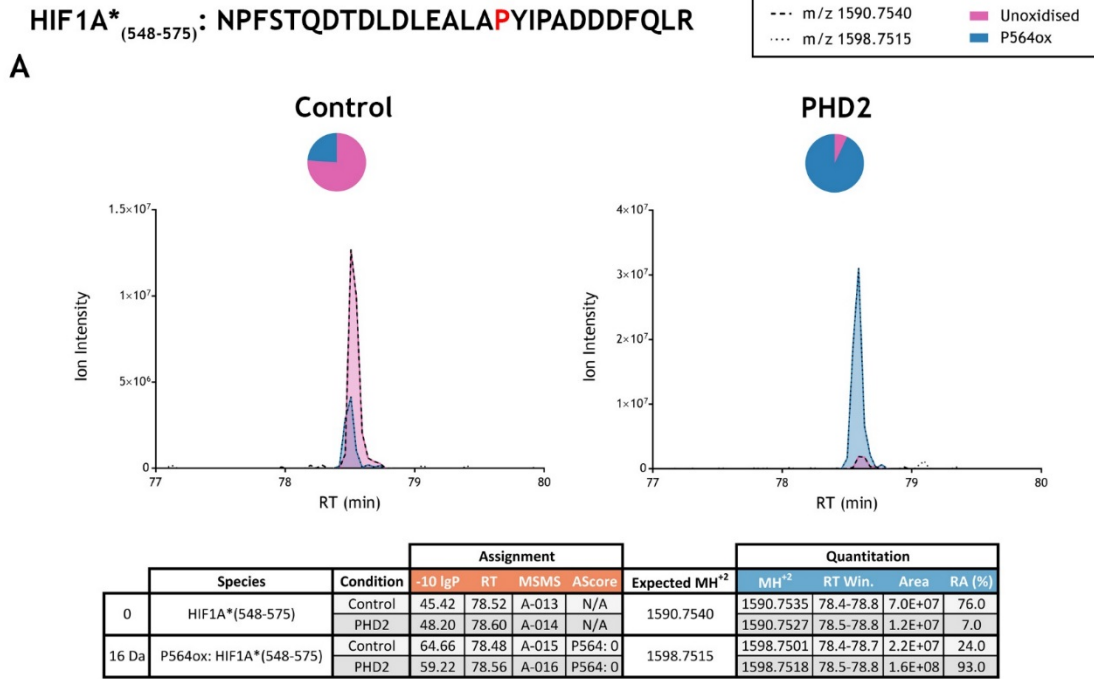


Supplementary File 2

B-01: HIF Control A
Alt Substrate: NDRG3



B-02:

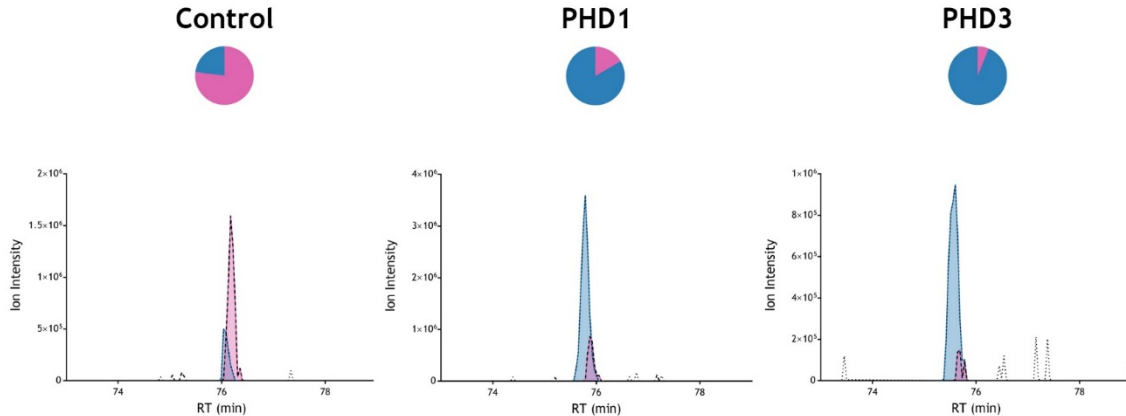
HIF Control B

Alt Substrate: SPRY2 & TP53 (PHD1); EPOR & MAPK6 (PHD3)

HIF1A*₍₅₄₈₋₅₇₅₎: NPFSTQDTLDLEALAPYIPADDDFQLR

A

--- m/z 1590.7540
 m/z 1598.7515
 Unoxidised
 P564ox

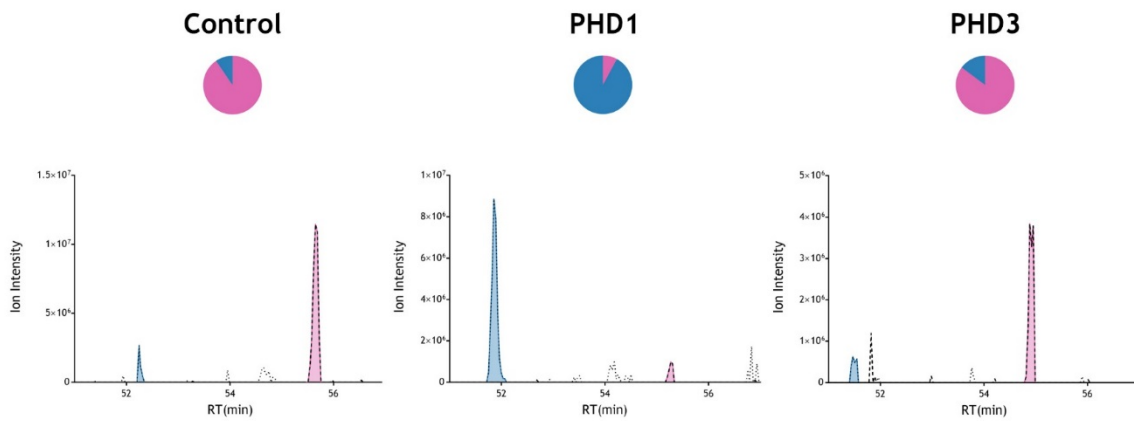


	Species	Condition	Assignment				Expected MH ²	Quantitation			
			-10 lgP	RT	MSMS	AScore		MH ²	RT Win.	Area	RA (%)
0	HIF1A*(548-575)	Control	54.33	76.14	A-021	N/A	1590.7540	1590.7566	76.0-76.4	1.4E+07	76.9
		PHD1	33.32	75.84	A-022	N/A		1590.7517	75.8-76.1	7.3E+06	16.6
		PHD3	ND					1590.7514	75.6-75.7	8.1E+05	6.2
16 Da	P564ox: HIF1A*(548-575)	Control	43.64	76.06	A-023	P564: 0	1598.7515	1598.7590	76.0-76.3	4.17E+06	23.1
		PHD1	43.17	75.84	A-024	P564: 0		1598.7491	75.6-76.1	3.66E+07	83.4
		PHD3	38.54	75.53	A-025	P564: 0		1598.7510	75.3-75.9	1.22E+07	93.8

HIF1A*₍₃₉₂₋₄₀₃₎: KEPDALTLAPA

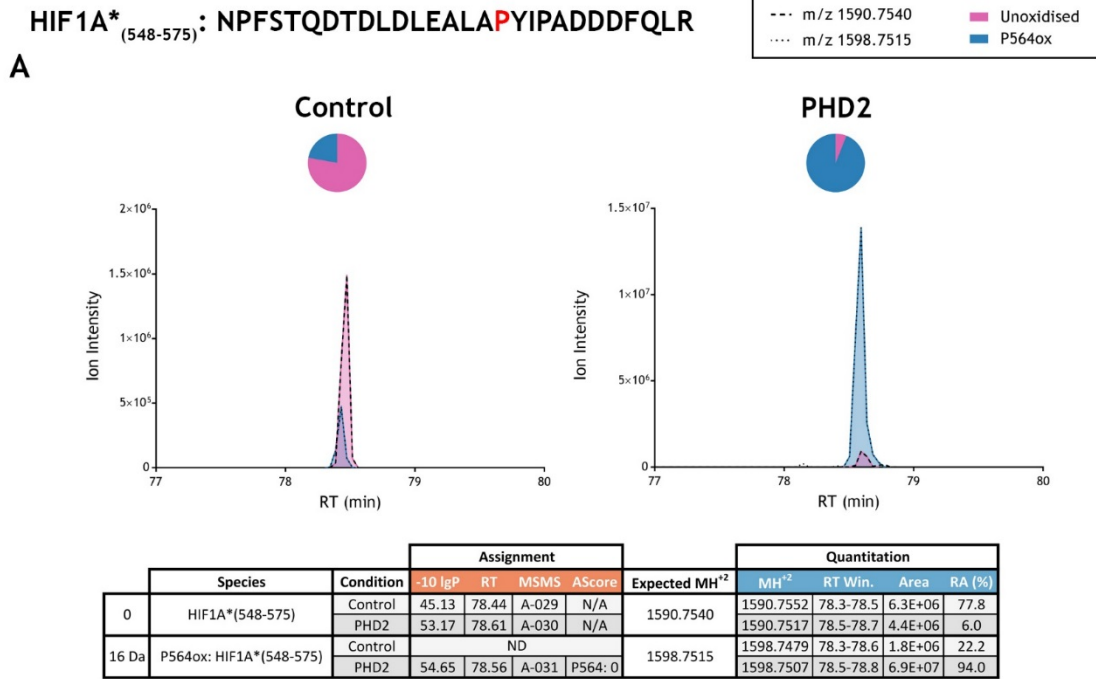
B

--- m/z 619.8532
 m/z 627.8506
 Unoxidised
 P402ox



	Species	Condition	Assignment				Expected MH ²	Quantitation			
			-10 lgP	RT	MSMS	AScore		MH ²	RT Win.	Area	RA (%)
0	HIF1A*(392-403)	Control	16.96	55.61	A-026	N/A	619.8532	619.8524	55.5-55.7	8.3E+07	90.5
		PHD1	ND					619.8528	55.2-55.3	5.5E+06	7.9
		PHD3	18.11	54.94	A-027	N/A		619.8519	54.8-54.9	2.6E+07	85.2
16 Da	P402ox: HIF1A*(392-403)	Control	ND				627.8506	627.8477	52.2-52.3	8.67E+06	9.5
		PHD1	18.30	51.82	A-028	P402: 73.62		627.8496	51.7-52.1	6.43E+07	92.1
		PHD3	ND					627.8491	51.4-51.5	4.44E+06	14.8

B-03: HIF Control C
Alt Substrate: CENPN & FLNA

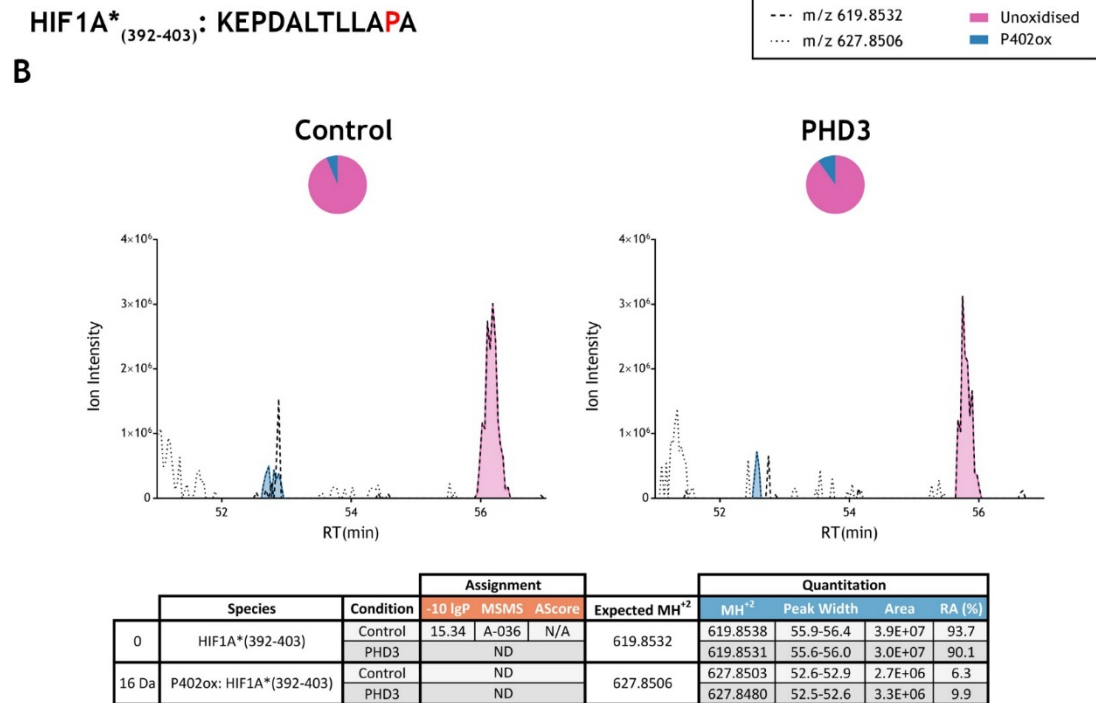
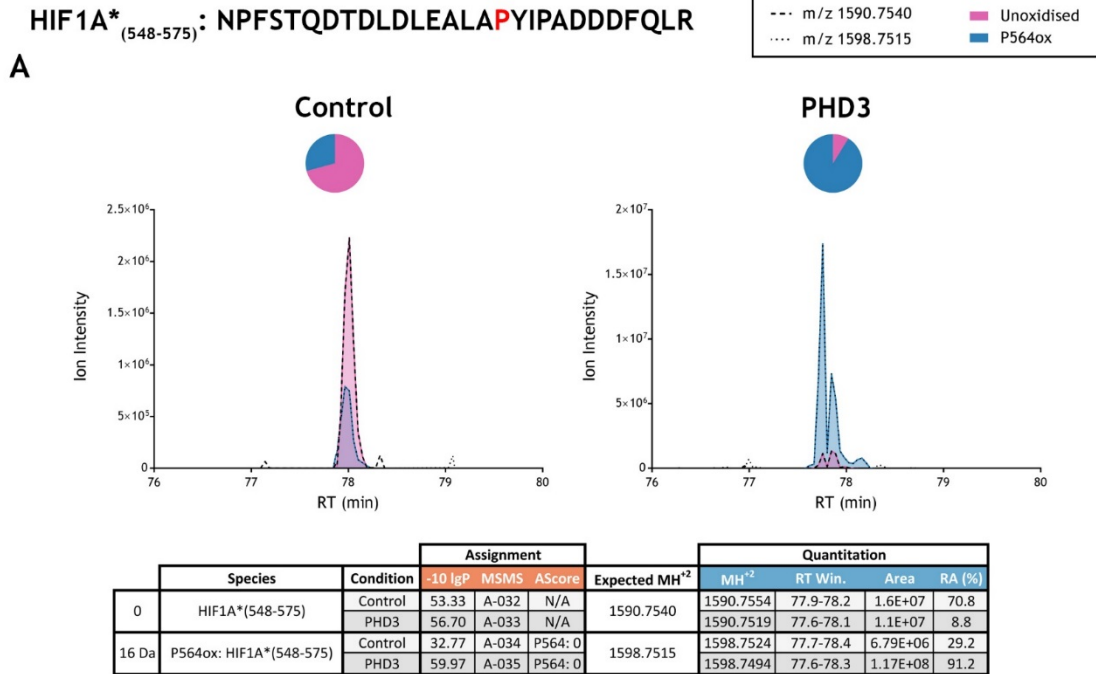


Peptide Not Detected

B-04:

HIF Control D

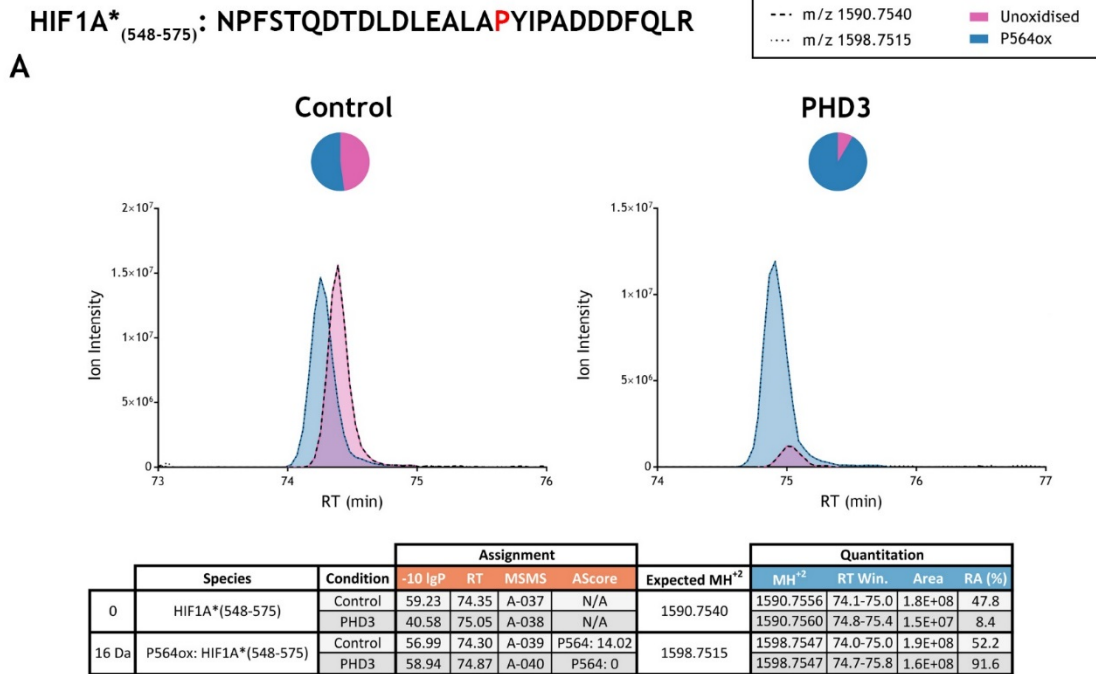
Alt Substrate: ACTB, ADRB2, ATF4 & PKM



B-05:

HIF Control E

Alt Substrate: SPRY2 & TELO2



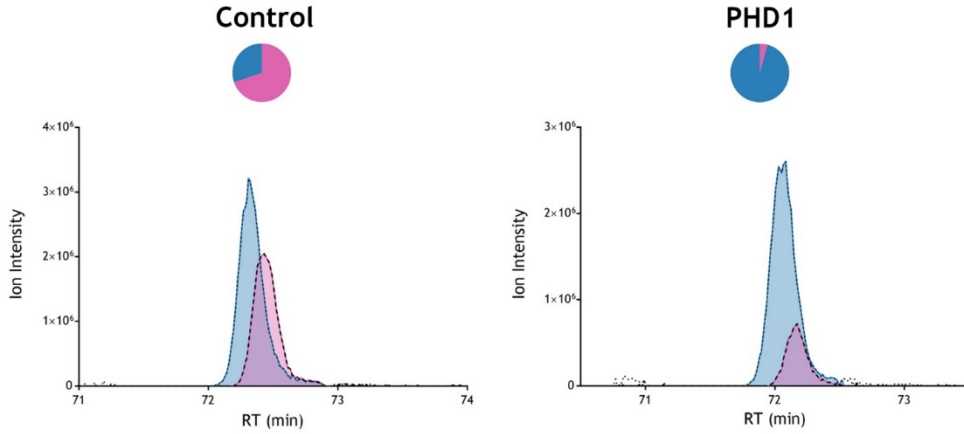
B-06:

HIF Control F
Alt Substrate: CEP192

HIF1A*₍₅₄₈₋₅₇₅₎: NPFSTQDTLDLEALAPYIPADDDFQLR

--- m/z 1590.754 Unoxidised
... m/z 1598.7515 P564ox

A

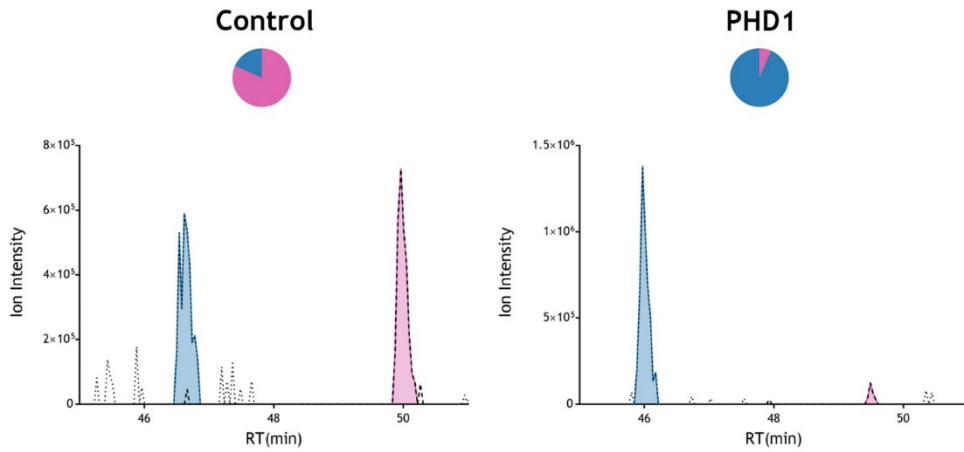


	Species	Condition	Assignment				Expected MH ²	Quantitation			
			-10 lgP	RT	MSMS	AScore		MH ²	RT Win.	Area	RA (%)
0	HIF1A*(548-575)	Control	43.91	72.41	A-041	N/A	1590.7540	1590.7566	72.2-72.9	2.8E+07	39.9
		PHD1	16.76	72.16	A-042	N/A		1590.7567	72.0-72.5	8.3E+06	18.4
16 Da	P564ox: HIF1A*(548-575)	Control	52.82	72.38	A-043	P564: 0	1598.7515	1598.7535	72.1-72.9	4.2E+07	60.1
		PHD1	49.04	72.11	A-044	P564: 0		1598.7538	71.8-72.5	3.7E+07	81.6

HIF1A*₍₃₉₂₋₄₀₃₎: KEPDALTL LAPA

--- m/z 619.8532 Unoxidised
... m/z 627.8506 P402ox

B



	Species	Condition	Assignment				Expected MH ²	Quantitation			
			-10 lgP	RT	MSMS	AScore		MH ²	RT Win.	Area	RA (%)
0	HIF1A*(392-403)	Control			ND		619.8532	619.8527	49.9-50.2	7.3E+06	49.4
		PHD1			ND			619.8521	49.4-49.6	6.2E+05	5.0
16 Da	P402ox: HIF1A*(392-403)	Control			ND		627.8506	627.8506	46.5-46.8	7.5E+06	50.6
		PHD1	15.48	46.01	A-045	P402: 73.62		627.8510	45.9-46.2	1.2E+07	95.0

B-07:

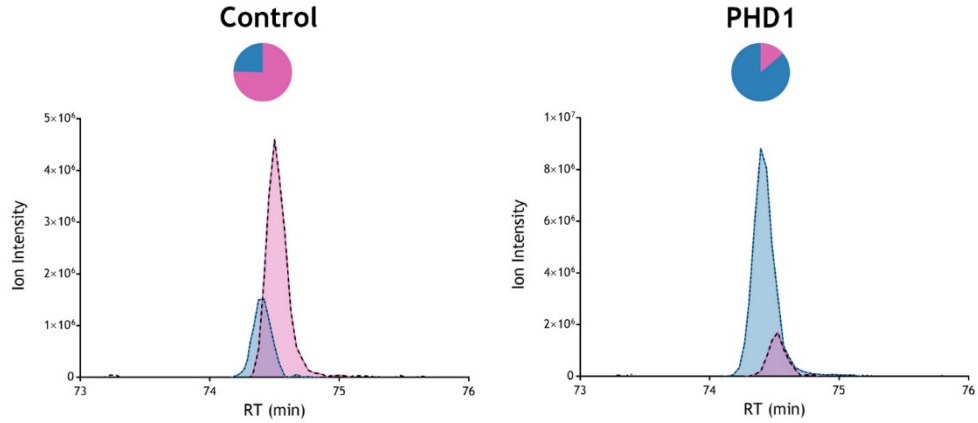
HIF Control G

Alt Substrate: FOXO3 & IKBKB

HIF1A*
(548-575): NPFSTQDTLDLEALAPYIPADDDFQLR

--- m/z 1590.7540
 m/z 1598.7515
 Unoxidised
 P564ox

A

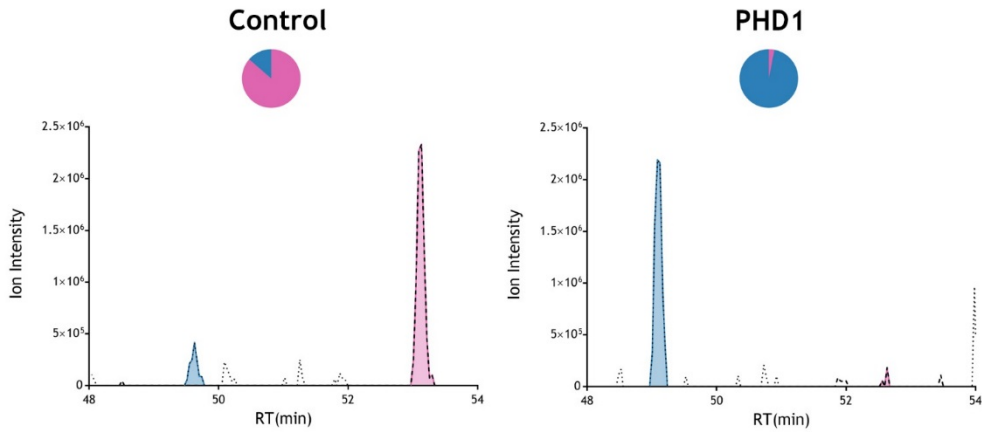


	Species	Condition	Assignment				Quantitation				
			-10 IgP	RT	MSMS	AScore	Expected MH ²	MH ²	RT Win.	Area	RA (%)
0	HIF1A*(548-575)	Control	45.06	74.54	A-048	N/A	1590.7540	1590.7502	74.3-75.0	5.0E+07	75.5
		PHD1	36.82	74.53	A-049	N/A		1590.7526	74.3-74.8	1.6E+07	13.8
16 Da	P564ox: HIF1A*(548-575)	Control	26.75	74.42	A-050	P564: 0	1598.7515	1598.7496	74.2-74.8	1.6E+07	24.5
		PHD1	53.54	74.40	A-051	P564: 0		1598.7502	74.1-75.-1	1.0E+08	86.2

HIF1A*
(392-403): KEPDALTLLAPA

--- m/z 619.8532
 m/z 627.8506
 Unoxidised
 P402ox

B



	Species	Condition	Assignment				Quantitation				
			-10 IgP	RT	MSMS	AScore	Expected MH ²	MH ²	RT Win.	Area	RA (%)
0	HIF1A*(392-403)	Control	14.79	53.09	A-052	N/A	619.8532	619.8532	53.0-53.3	2.0E+07	86.4
		PHD1			ND			619.8509	52.5-52.6	5.6E+05	3.0
16 Da	P402ox: HIF1A*(392-403)	Control			ND		627.8506	627.8503	49.5-49.7	3.1E+06	13.6
		PHD1	19.51	49.08	A-053	P402: 73.62		627.8515	49.0-49.2	1.8E+07	97.0

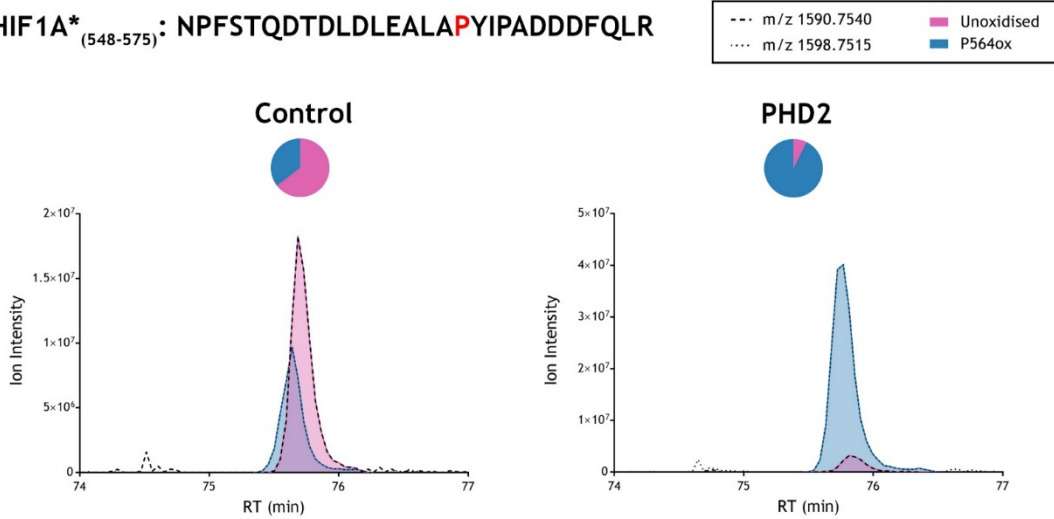
B-08:

HIF Control H

Alt Substrate: EEF2K, PDE4D & TRPA1

HIF1A*₍₅₄₈₋₅₇₅₎: NPFSTQDTLDLEALAPYIPADDDFQLR

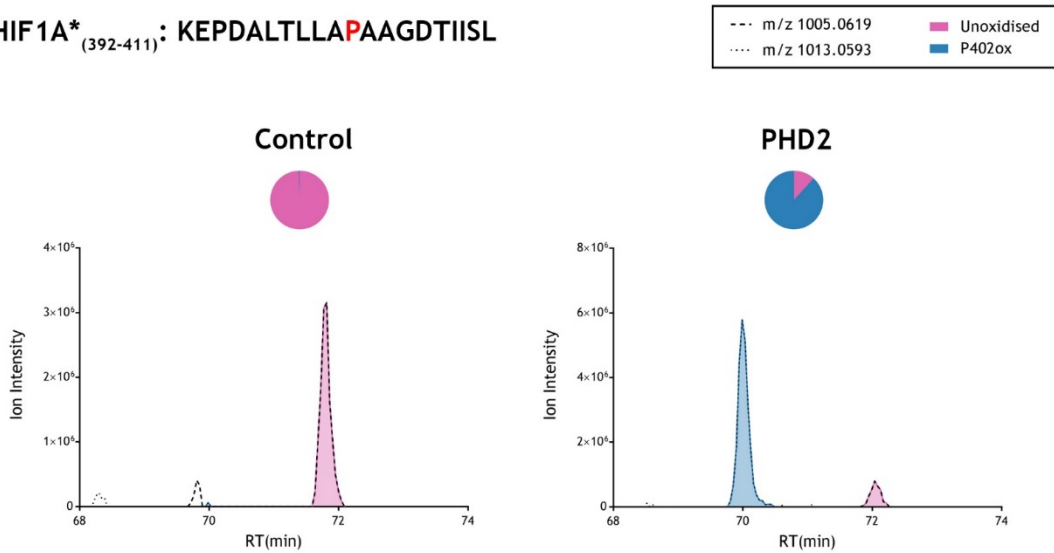
A



	Species	Condition	Assignment				Expected MH ⁺	Quantitation			
			-10 IgP	RT	MSMS	AScore		MH ⁺	RT Win.	Area	RA (%)
0	HIF1A*(548-575)	Control	62.03	75.91	A-054	N/A	1590.7540	1590.7564	75.5-76.2	2.0E+08	64.5
		PHD2	53.10	75.82	A-055	N/A		1590.7574	75.6-76.2	4.1E+07	7.4
16 Da	P564ox: HIF1A*(548-575)	Control	71.54	75.73	A-056	P564: 8.69	1598.7515	1598.7527	75.4-76.2	1.1E+08	35.5
		PHD2	60.86	75.68	A-057	P564: 17.01		1598.7544	75.5-76.5	5.2E+08	92.6

HIF1A*₍₃₉₂₋₄₁₁₎: KEPDALTLAPAAAGDTIISL

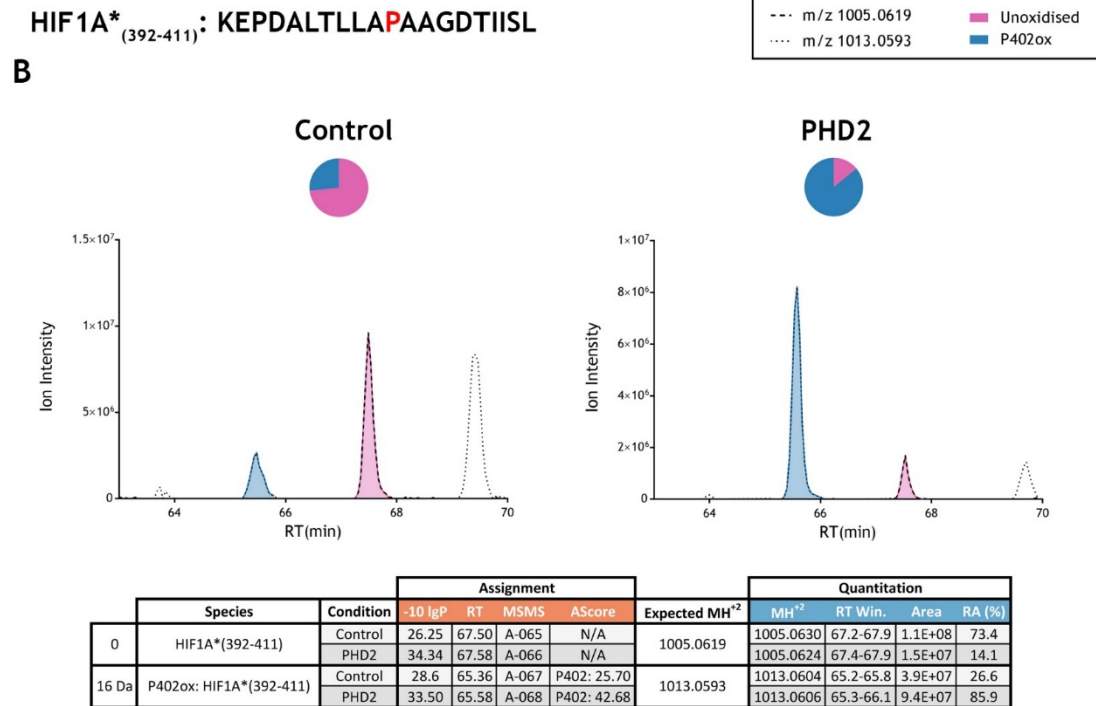
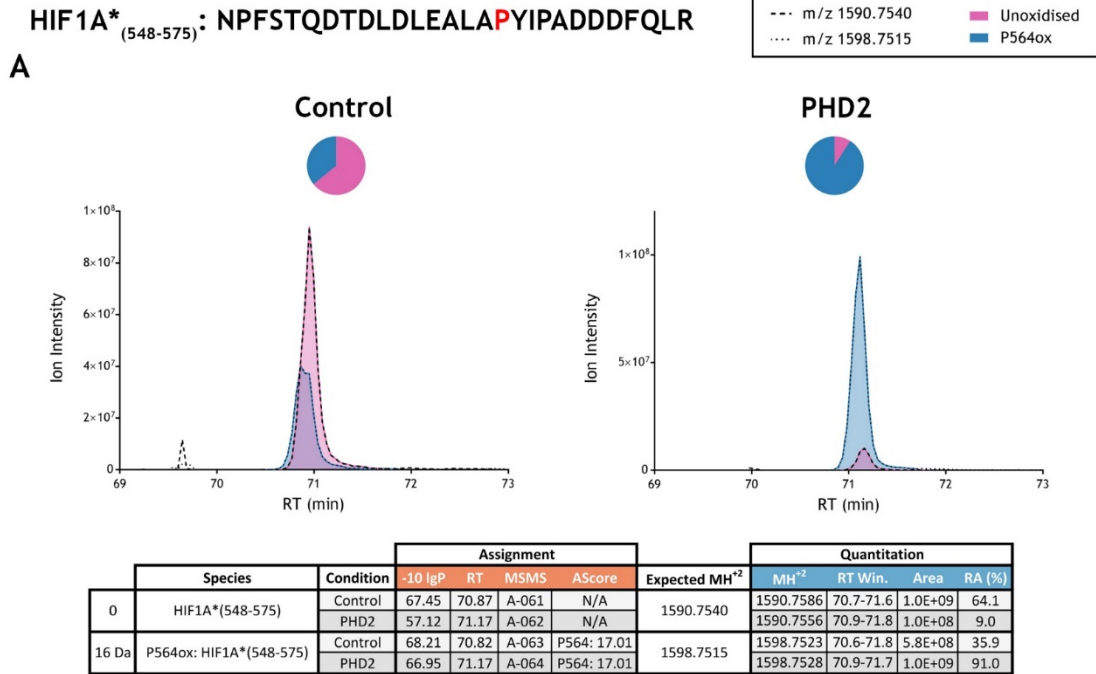
B



	Species	Condition	Assignment				Expected MH ⁺	Quantitation			
			-10 IgP	RT	MSMS	AScore		MH ⁺	RT Win.	Area	RA (%)
0	HIF1A*(392-411)	Control	35.45	71.70	A-058	N/A	1005.0619	1005.0638	71.6-72.0	3.5E+07	99.5
		PHD2	23.08	71.97	A-059	N/A		1005.0605	71.9-72.2	8.8E+06	11.7
16 Da	P402ox: HIF1A*(392-411)	Control			ND		1013.0593	1013.0688	69.9-70.0	1.7E+05	0.5
		PHD2	38.13	69.92	A-060	P402: 28.70		1013.0597	69.8-70.4	6.6E+07	88.3

B-09:

HIF Control I
Alt Substrate: PPP2R2A

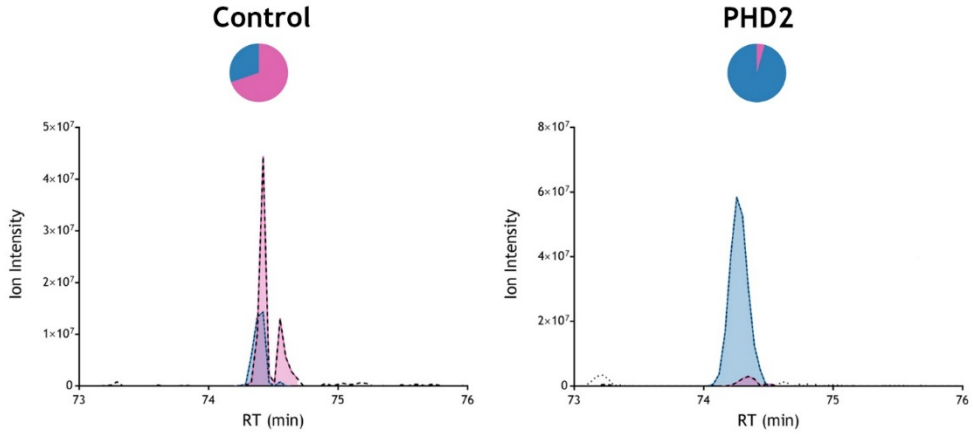


B-10: HIF Control J
Alt Substrate: AKT1

HIF1A*₍₅₄₈₋₅₇₅₎: NPFSTQDTLDLEALAP^YIPADDDFQLR

--- m/z 1590.754 ■ Unoxidised
 m/z 1598.7515 ■ P564ox

A

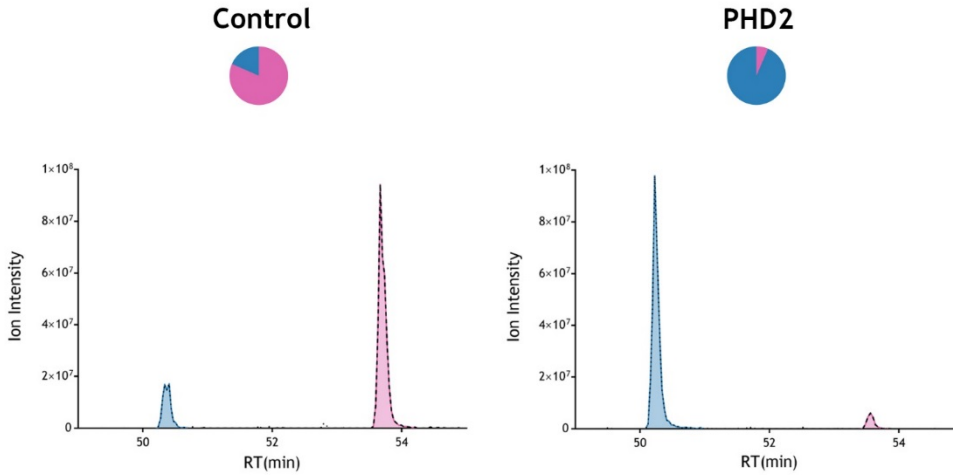


	Species	Condition	Assignment				Expected MH ²	Quantitation			
			-10 lgP	RT	MSMS	AScore		MH ²	RT Win.	Area	RA (%)
0	HIF1A*(548-575)	Control	62.70	74.60	A-069	N/A	1590.7540	1590.7472	74.3-74.7	2.2E+08	69.8
		PHD2	47.88	74.26	A-070	N/A		1590.7518	74.1-74.6	2.7E+07	4.3
16 Da	P564ox: HIF1A*(548-575)	Control	71.20	74.43	A-071	P564: 12.28	1598.7515	1598.7491	74.2-74.5	9.4E+07	30.2
		PHD2	56.74	74.40	A-072	P564: 17.01		1598.7476	74.0-74.5	6.0E+08	95.7

HIF1A*₍₃₉₂₋₄₀₃₎: KEPDAL^TLLAPA

--- m/z 619.8532 ■ Unoxidised
 m/z 627.8506 ■ P402ox

B

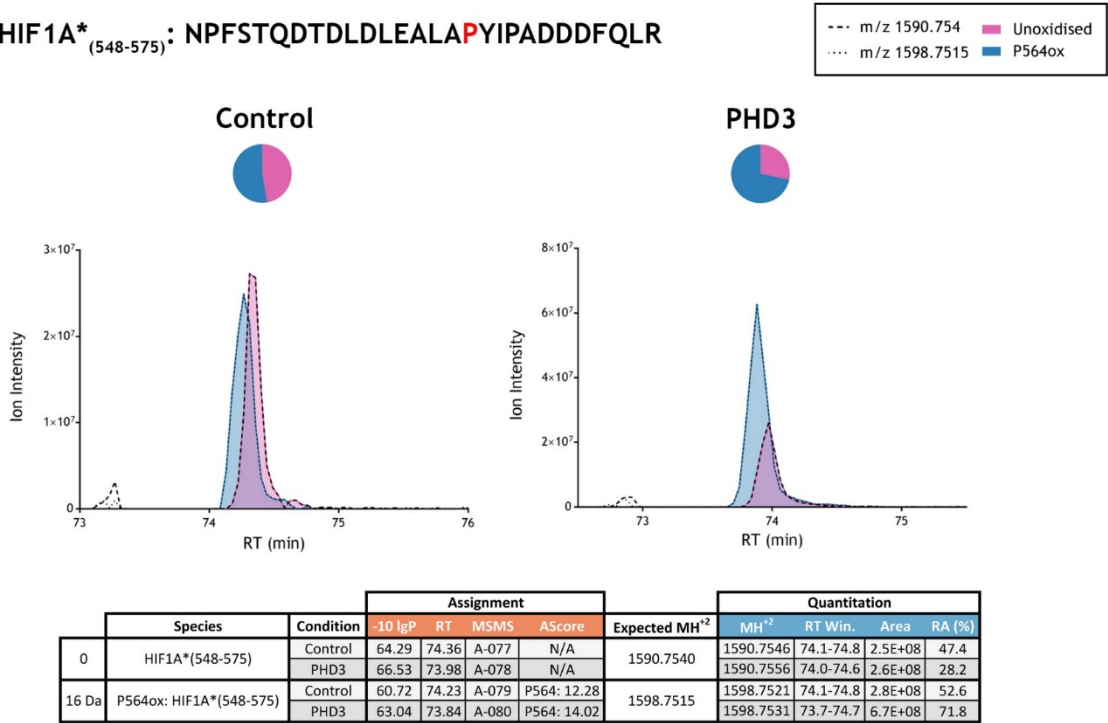


	Species	Condition	Assignment				Expected MH ²	Quantitation			
			-10 lgP	RT	MSMS	AScore		MH ²	RT Win.	Area	RA (%)
0	HIF1A*(392-403)	Control	20.28	53.74	A-073	N/A	619.8532	619.8528	53.6-54.2	6.9E+08	81.6
		PHD2	11.93	53.33	A-074	N/A		619.8531	53.4-53.9	4.6E+07	6.5
16 Da	P402ox: HIF1A*(392-403)	Control	18.49	50.38	A-075	P402: 64.33	627.8506	627.8496	50.2-50.7	1.6E+08	18.4
		PHD2	16.28	50.31	A-076	P402: 89.40		627.8505	50.1-50.9	6.7E+08	93.5

B-11: HIF Control K
Alt Substrate: ACACB

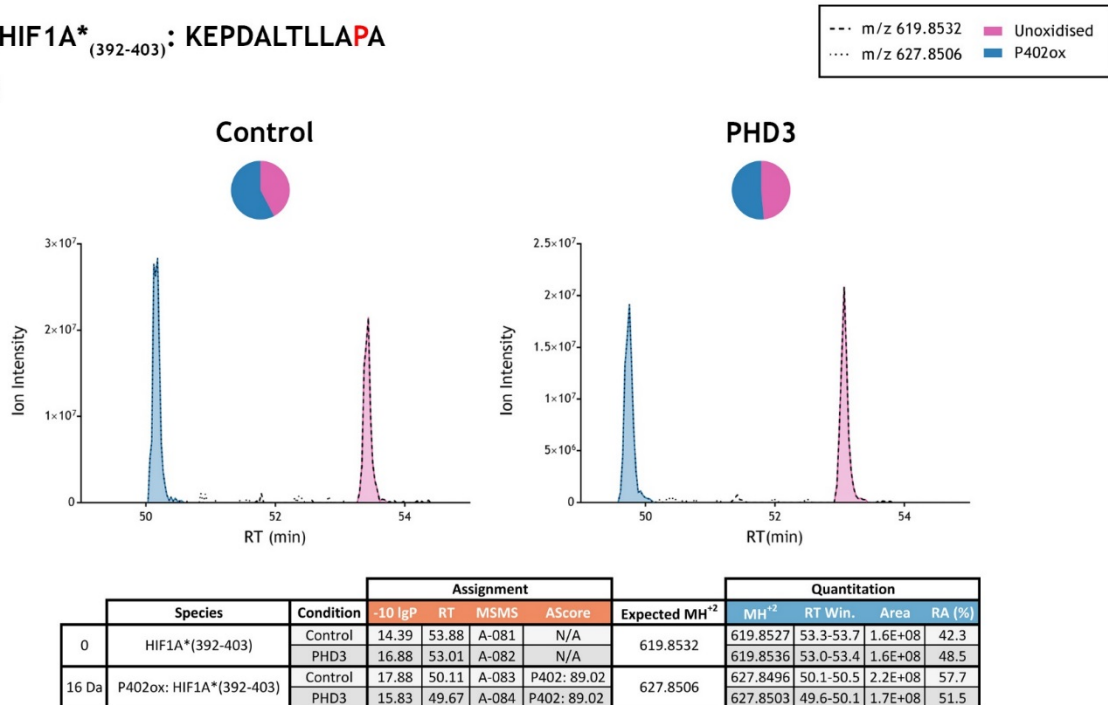
HIF1A*₍₅₄₈₋₅₇₅₎: NPFSTQD^TDL^DLEALAP^YIPADDD^FQLR

A



HIF1A*₍₃₉₂₋₄₀₃₎: KEPDAL^TLL^DL^DAPA

B

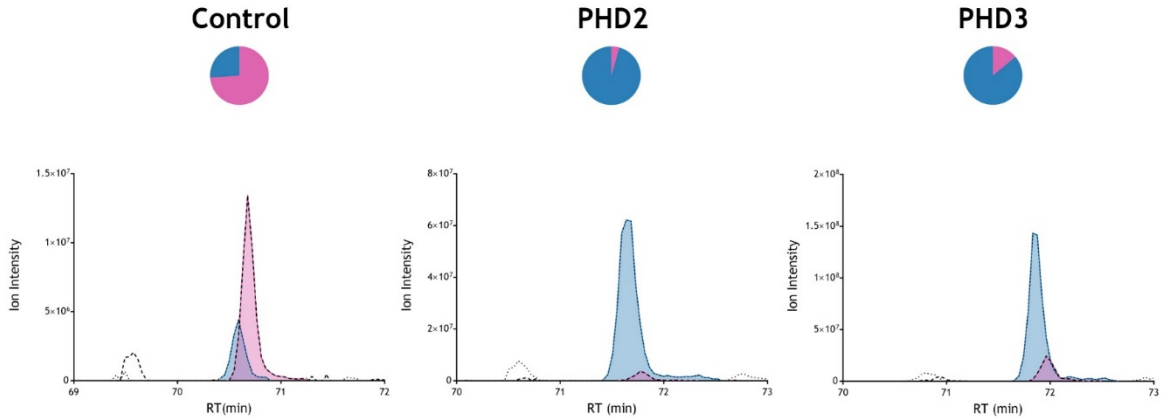


B-12: HIF Control L
Alt Substrate: THRA

HIF1A*₍₅₄₈₋₅₇₅₎: NPFSTQDTLDLEALAP^YIPADDDFQLR

A

--- m/z 1590.7540 ■ Unoxidised
 m/z 1598.7515 ■ P564ox

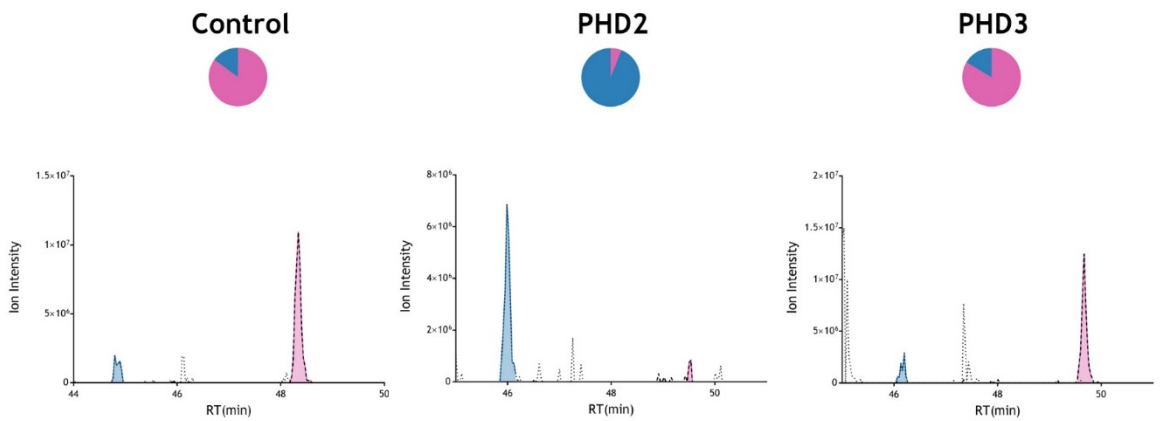


	Species	Condition	Assignment				Expected MH ⁺	Quantitation			
			-10 IgP	RT	MSMS	AScore		MH ⁺	RT Win.	Area	RA (%)
0	HIF1A*(548-575)	Control	56.93	70.73	A-092	N/A	1590.7540	1590.7555	70.5-71.3	1.2E+08	73.9
		PHD2	48.29	71.82	A-093	N/A		1590.7540	71.6-72.4	4.0E+07	4.4
		PHD3	62.31	72.01	A-094	N/A		1590.7533	71.8-72.5	2.4E+08	14.0
16 Da	P564ox: HIF1A*(548-575)	Control	55.98	70.64	A-095	P564: 0	1598.7515	1598.7516	70.4-70.9	4.2E+07	26.1
		PHD2	56.49	71.47	A-096	P564: 17.01		1598.7519	71.4-72.6	8.6E+08	95.6
		PHD3	66.58	71.84	A-097	P564: 14.02		1598.7507	71.7-72.7	1.5E+09	86.0

HIF1A*₍₃₉₂₋₄₀₃₎: KEPDAL^TLL^APA

B

--- m/z 619.8532 ■ Unoxidised
 m/z 627.8506 ■ P402ox



	Species	Condition	Assignment				Expected MH ⁺	Quantitation			
			-10 IgP	RT	MSMS	AScore		MH ⁺	RT Win.	Area	RA (%)
0	HIF1A*(392-403)	Control	16.06	48.29	A-098	N/A	619.8532	619.8533	48.2-48.6	8.5E+07	85.1
		PHD2			ND			619.8543	49.5	3.2E+06	6.0
		PHD3	12.43	49.68	A-099	N/A		619.8521	49.5-49.9	7.8E+07	83.6
16 Da	P402ox: HIF1A*(392-403)	Control			ND		627.8506	627.8512	44.7-45.0	1.5E+07	14.9
		PHD2	22.48	45.97	A-100	P402: 73.62		627.8510	45.9-46.2	4.9E+07	94.0
		PHD3			ND			627.8490	46.0-46.3	1.5E+07	16.4

B-13: HIF Control M
Alt Substrate: TP53

