

Figure 1A

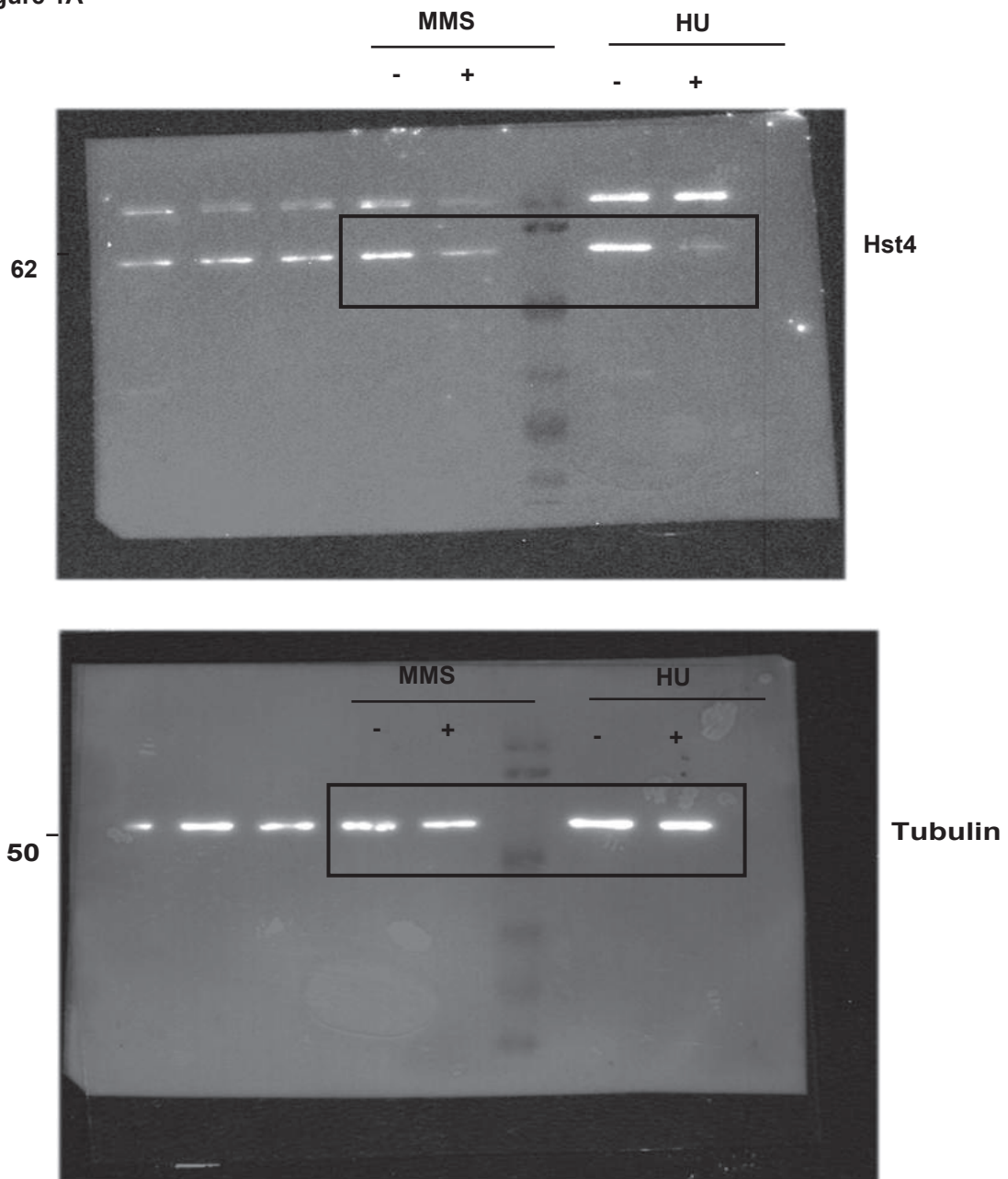


Figure 1B

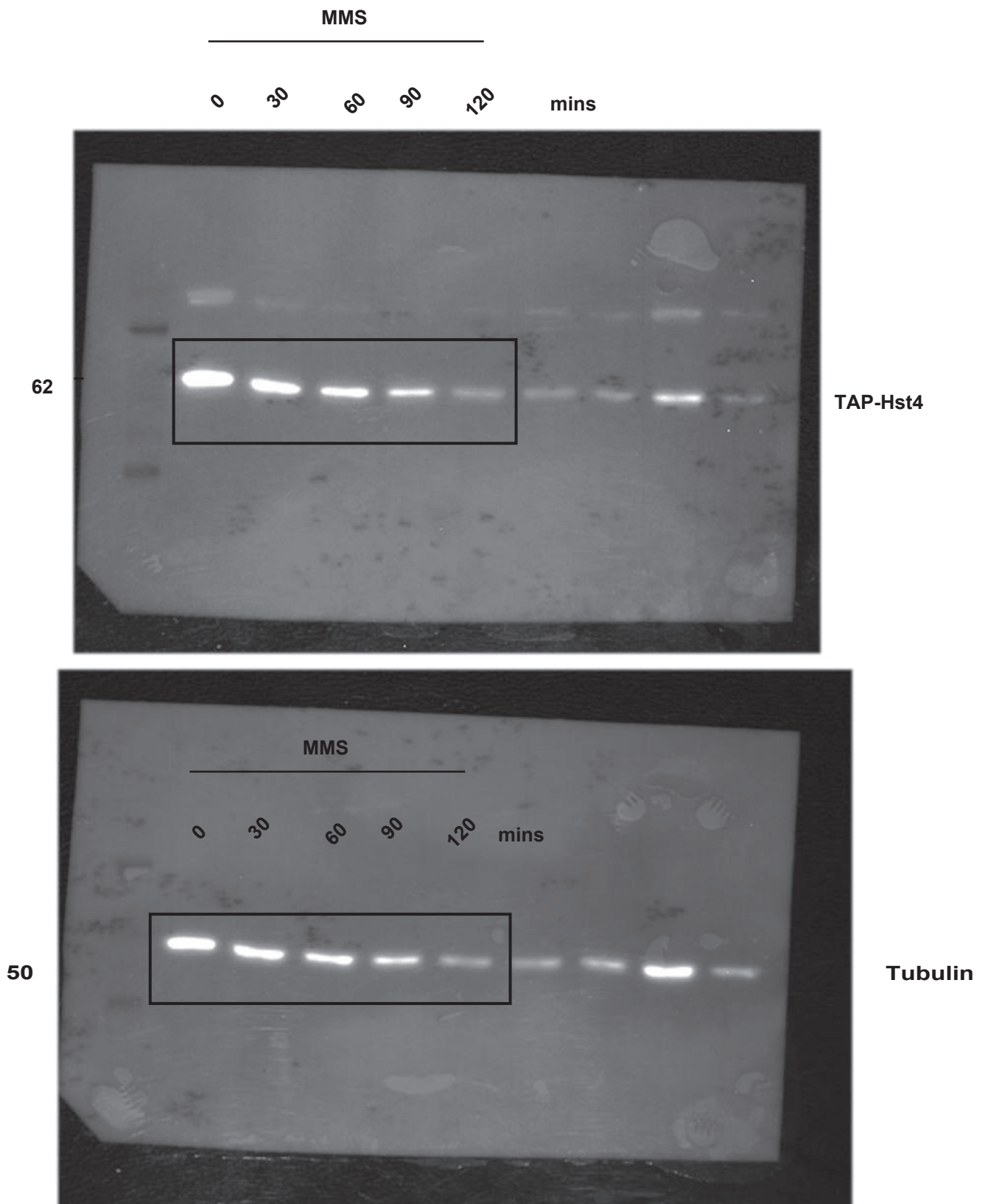


Figure 1C

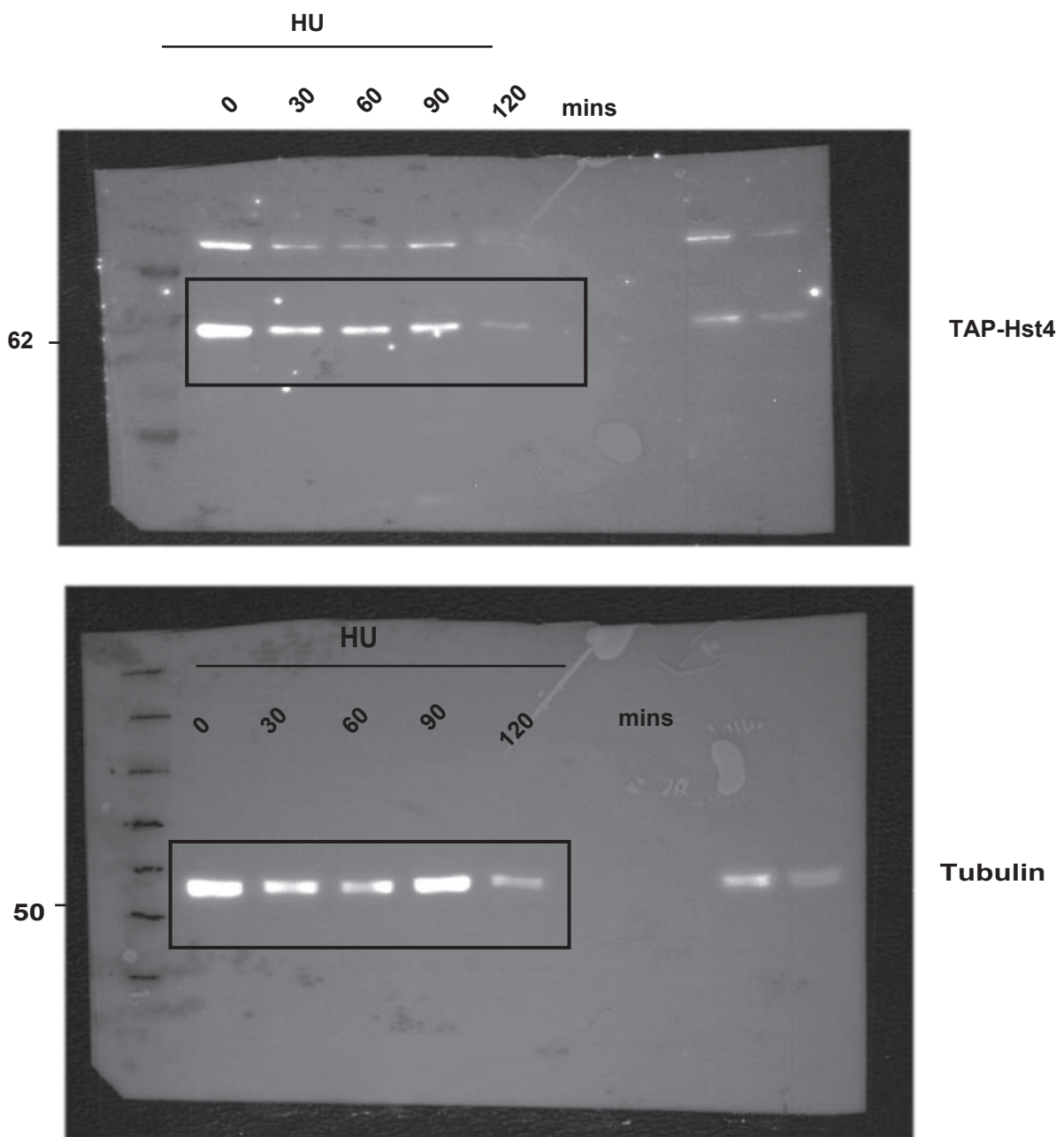


Figure 1G

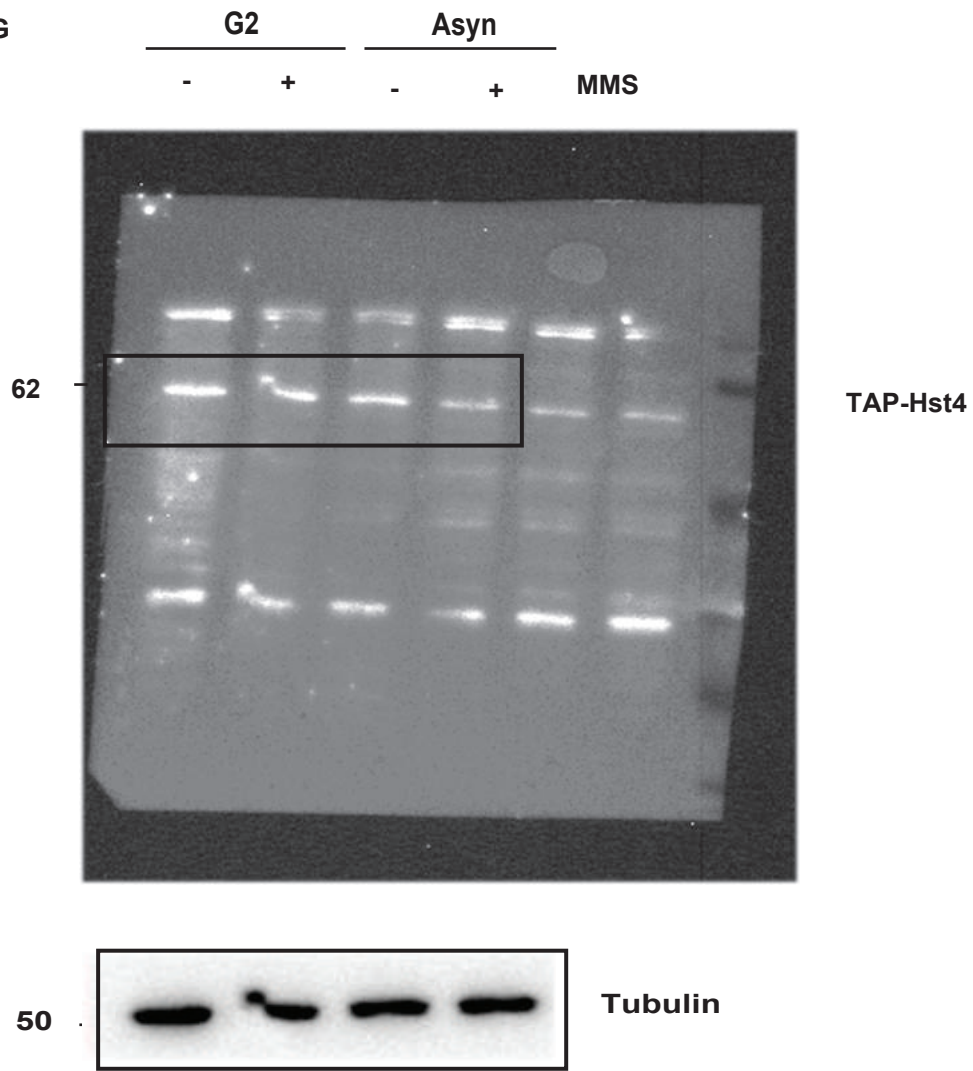


Figure 2A

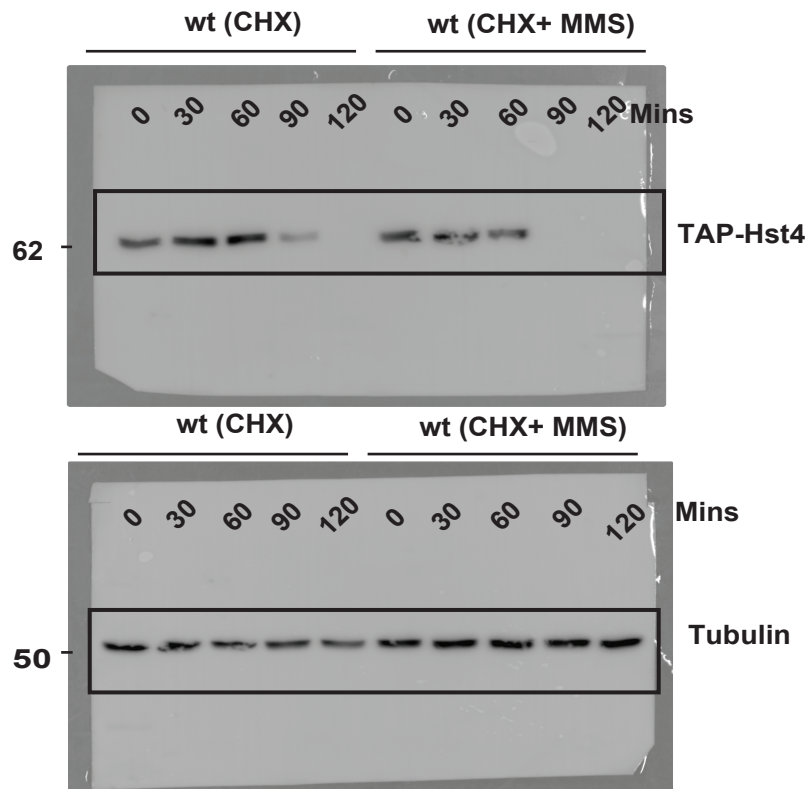


Figure 2-source data 1

Figure 2B

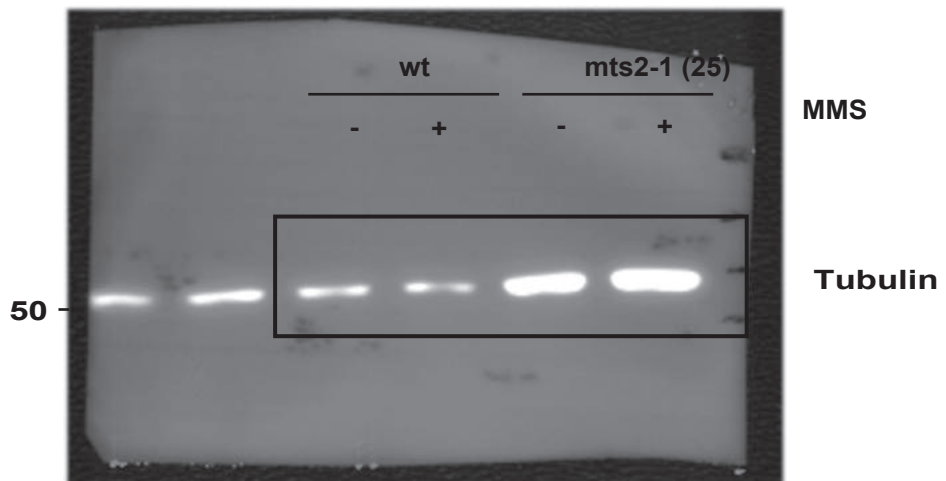
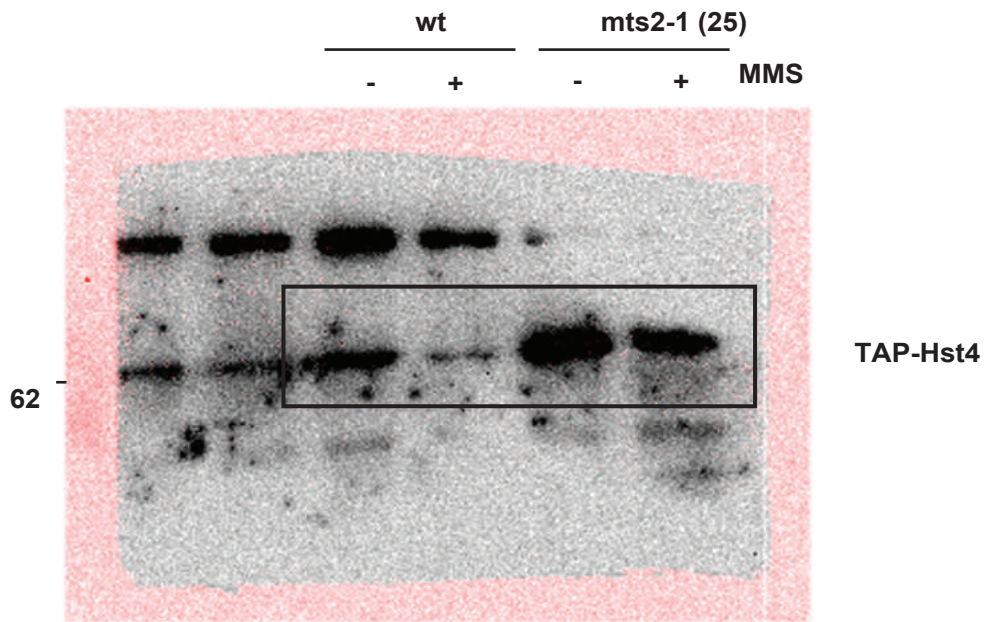


Figure 2C

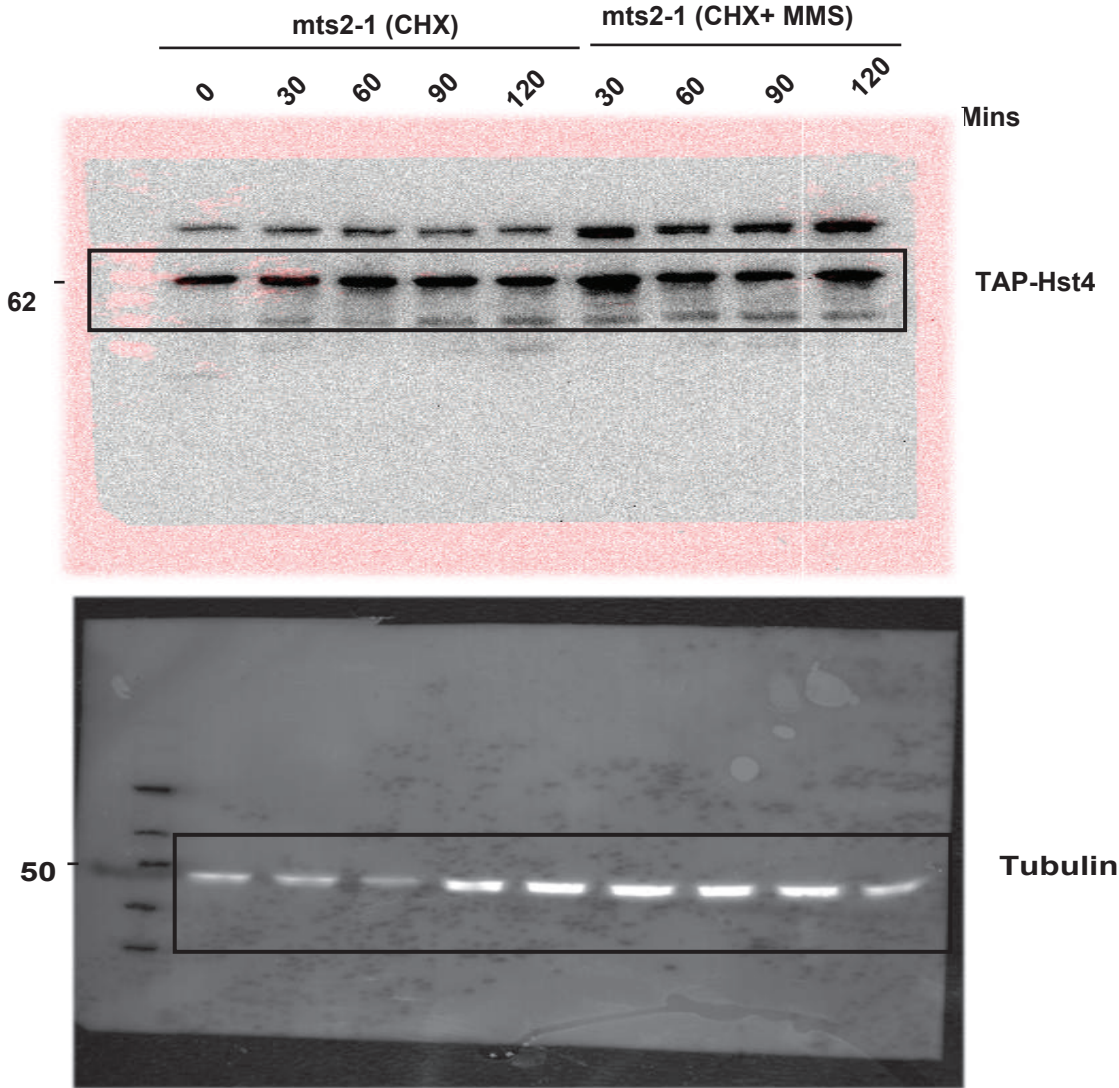


Figure 2D

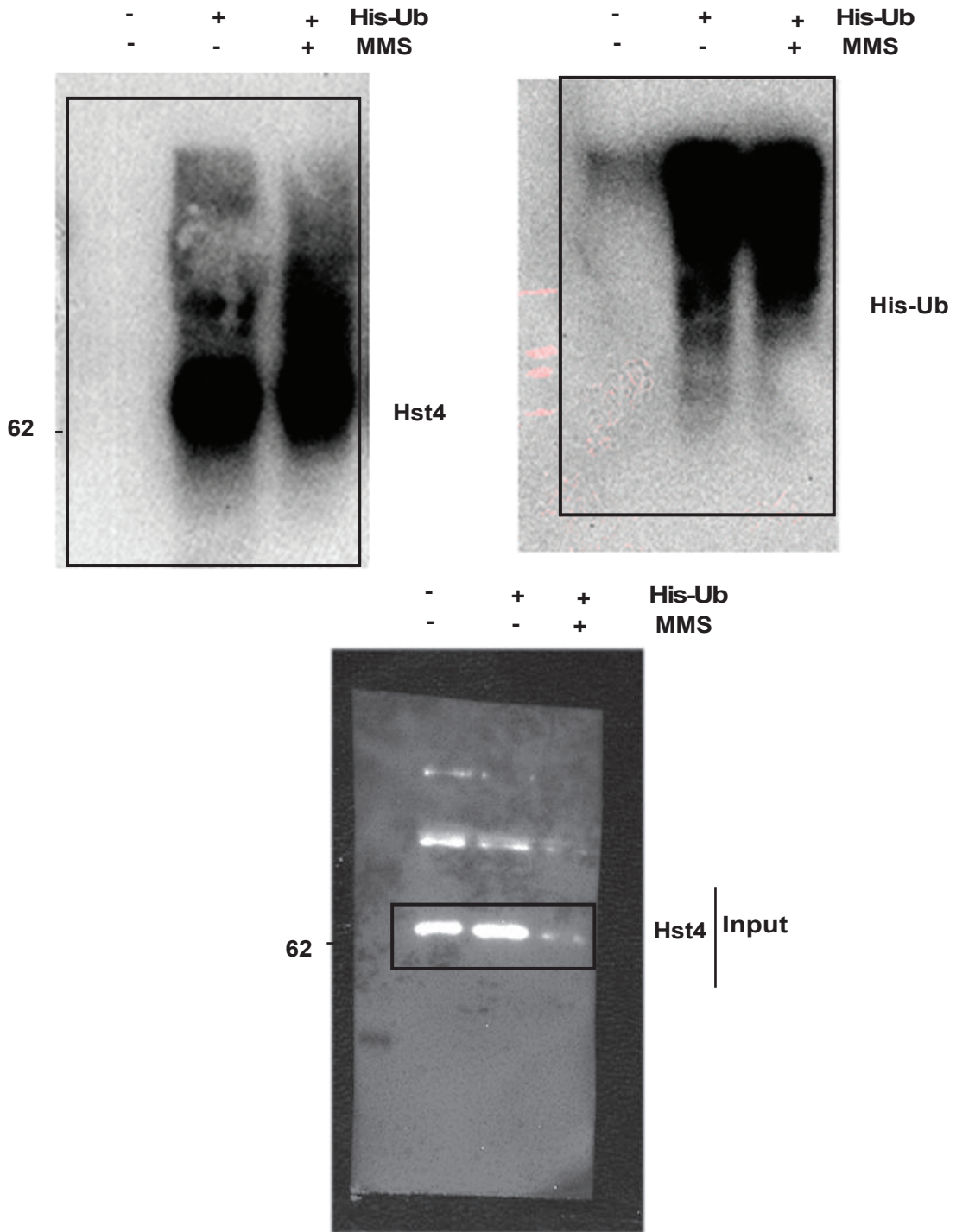


Figure 2-source data 1

Figure 2E

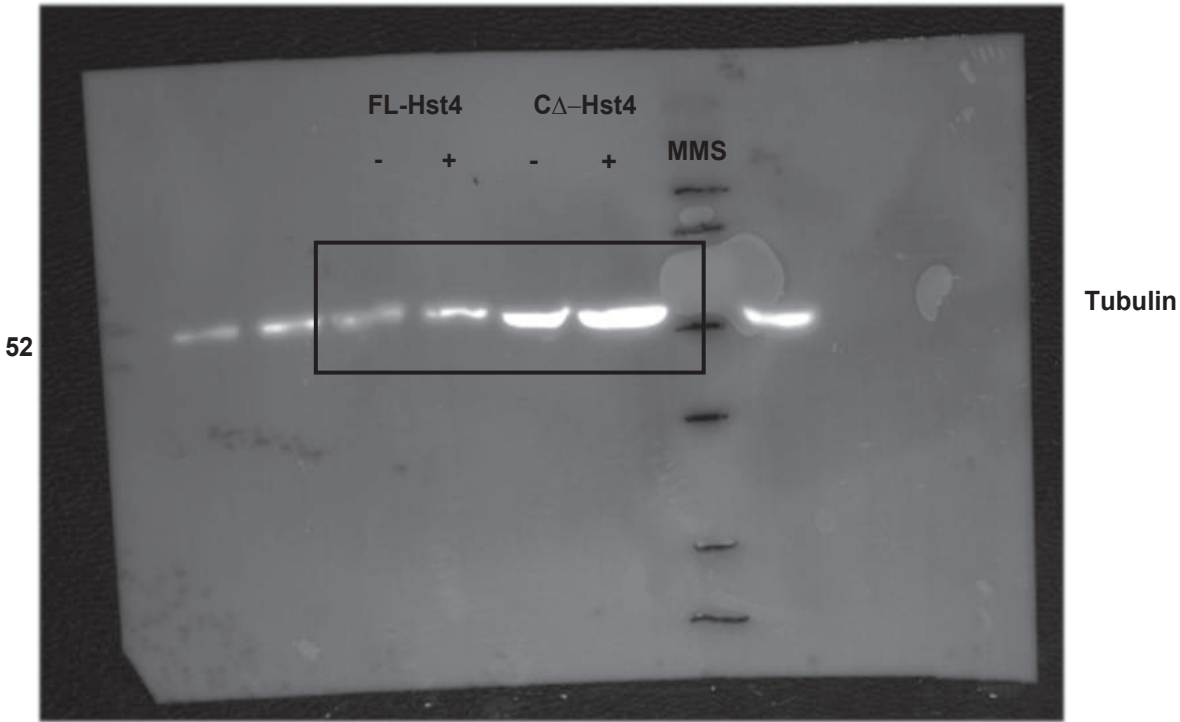
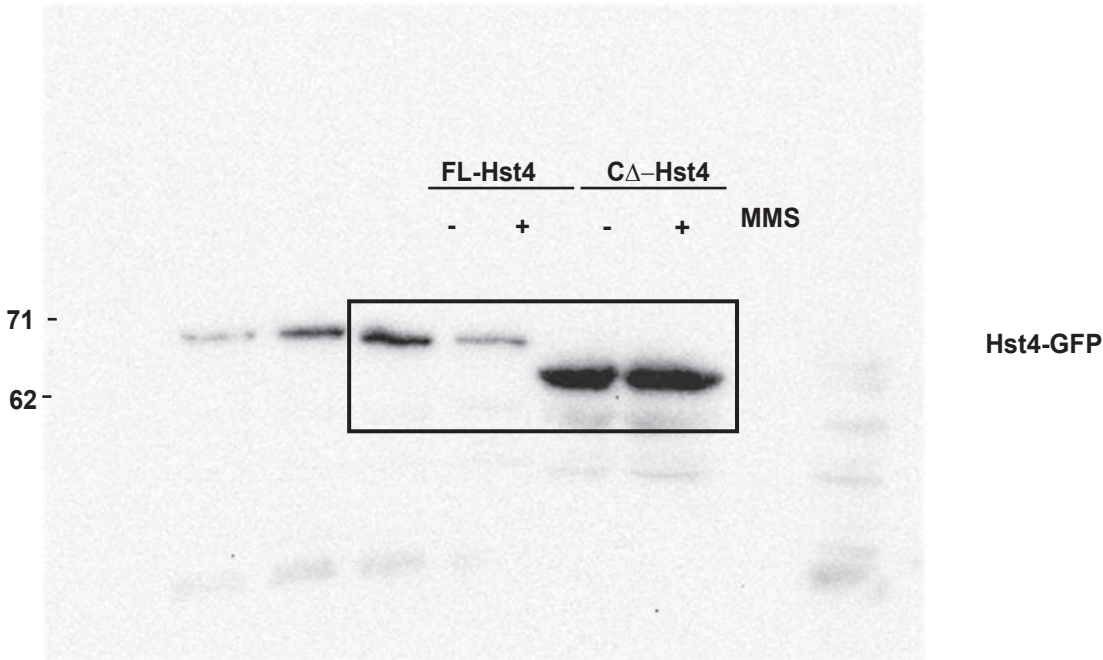


Figure 2-figure supplement 1-source data 1

Figure 2-figure supplement 1D

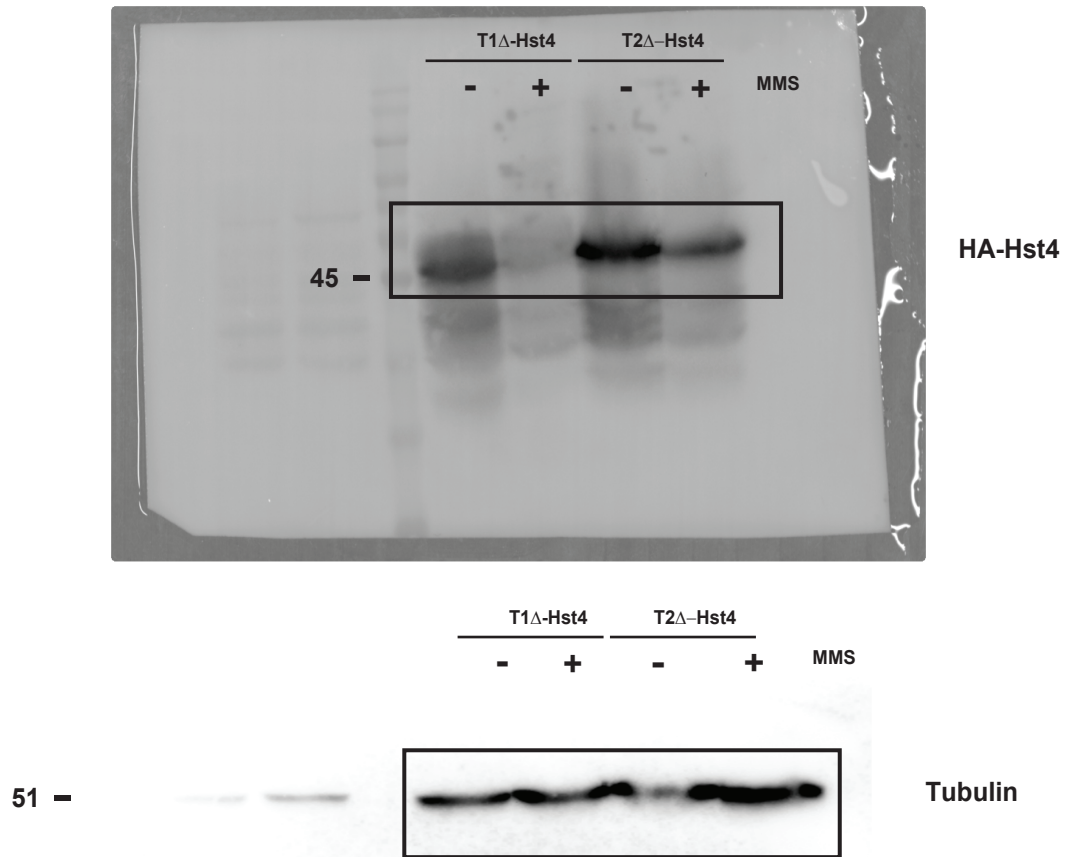


Figure 3-source data 1

Figure 3B

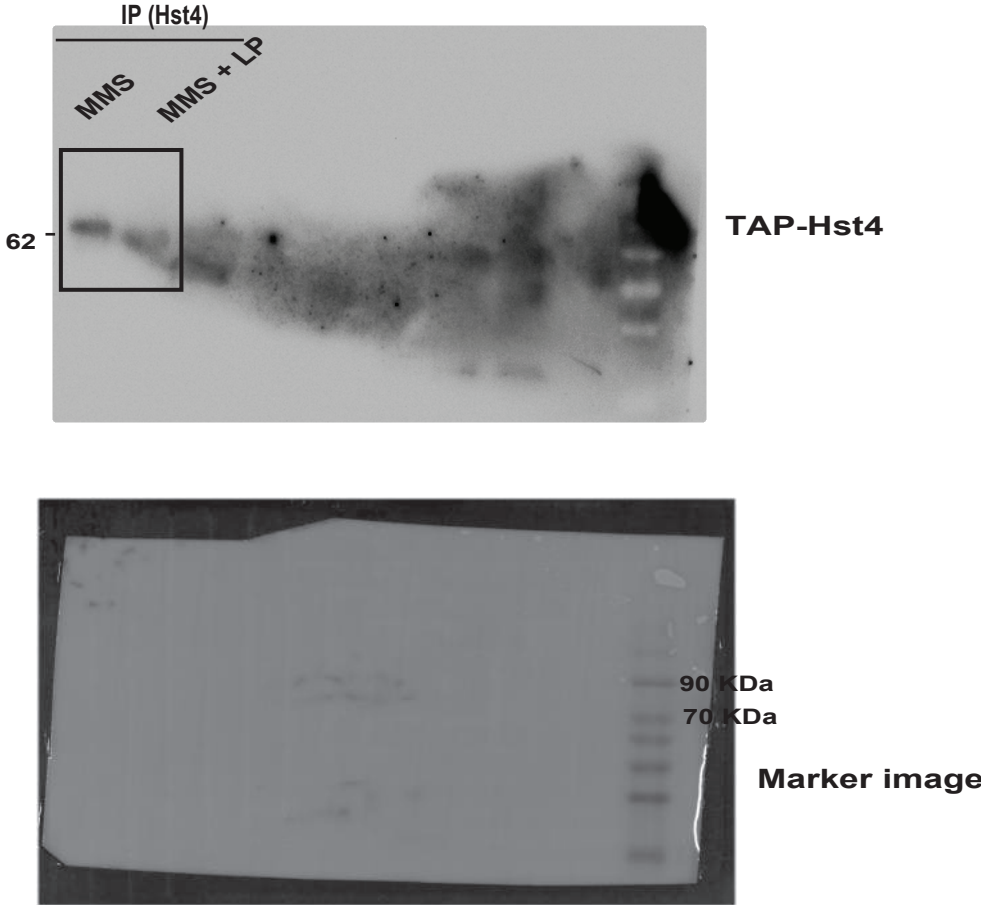


Figure 3-source data 1

Figure 3C

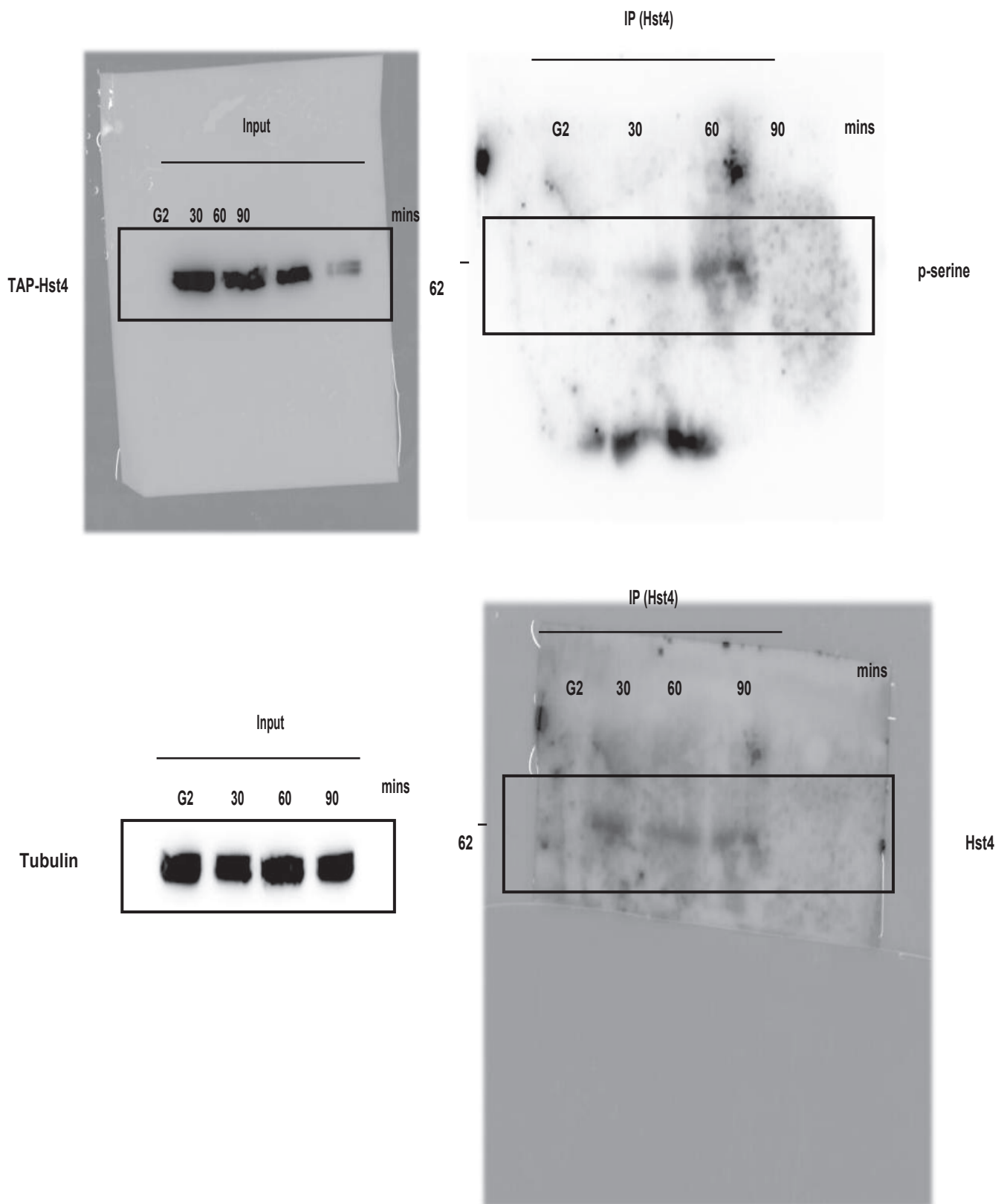
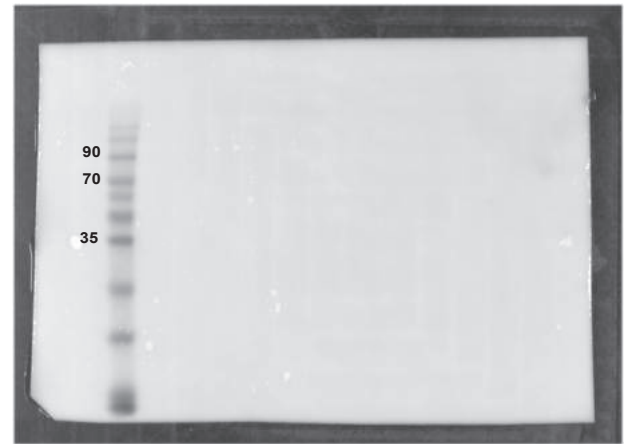
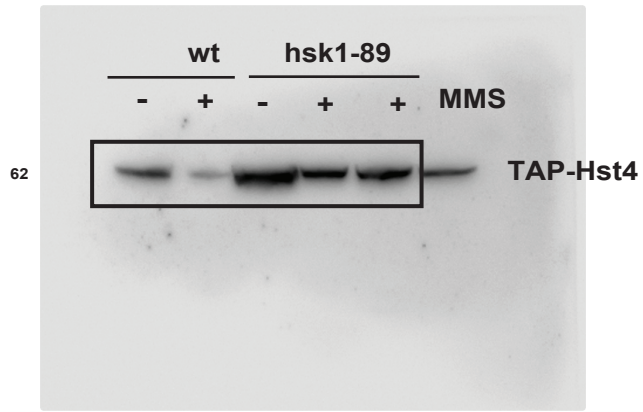
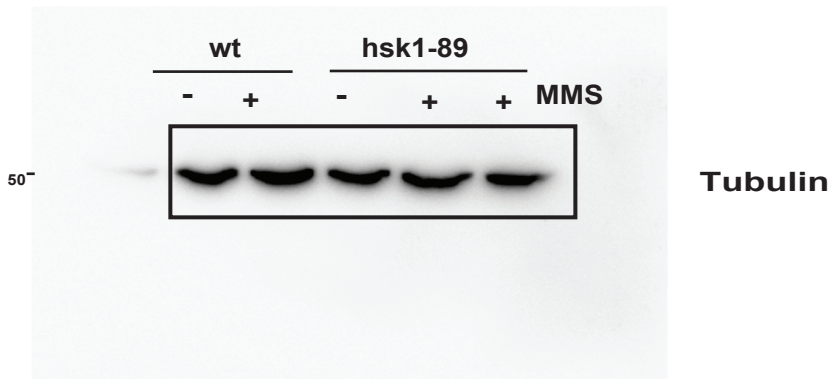


Figure 3-source data 1

Figure 3D



Marker image



Tubulin

Figure 3E

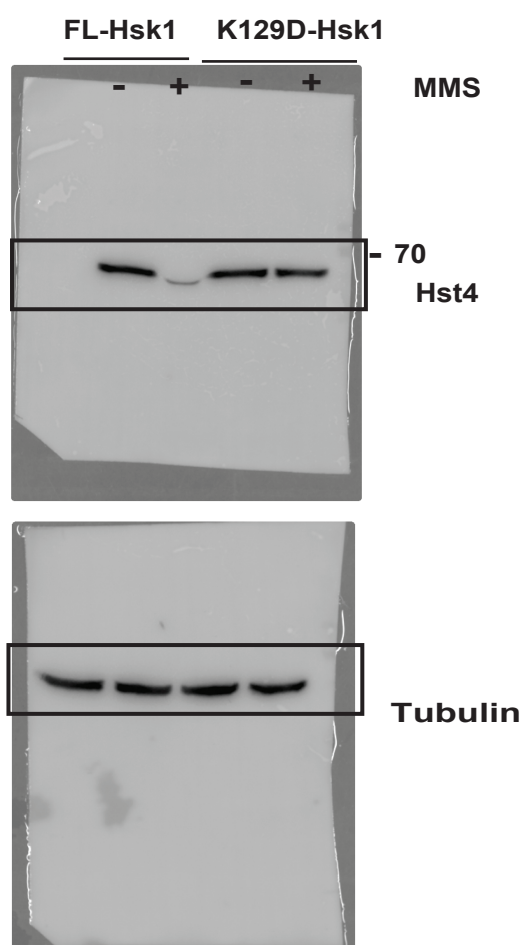


Figure 3-source data 1

Figure 3F

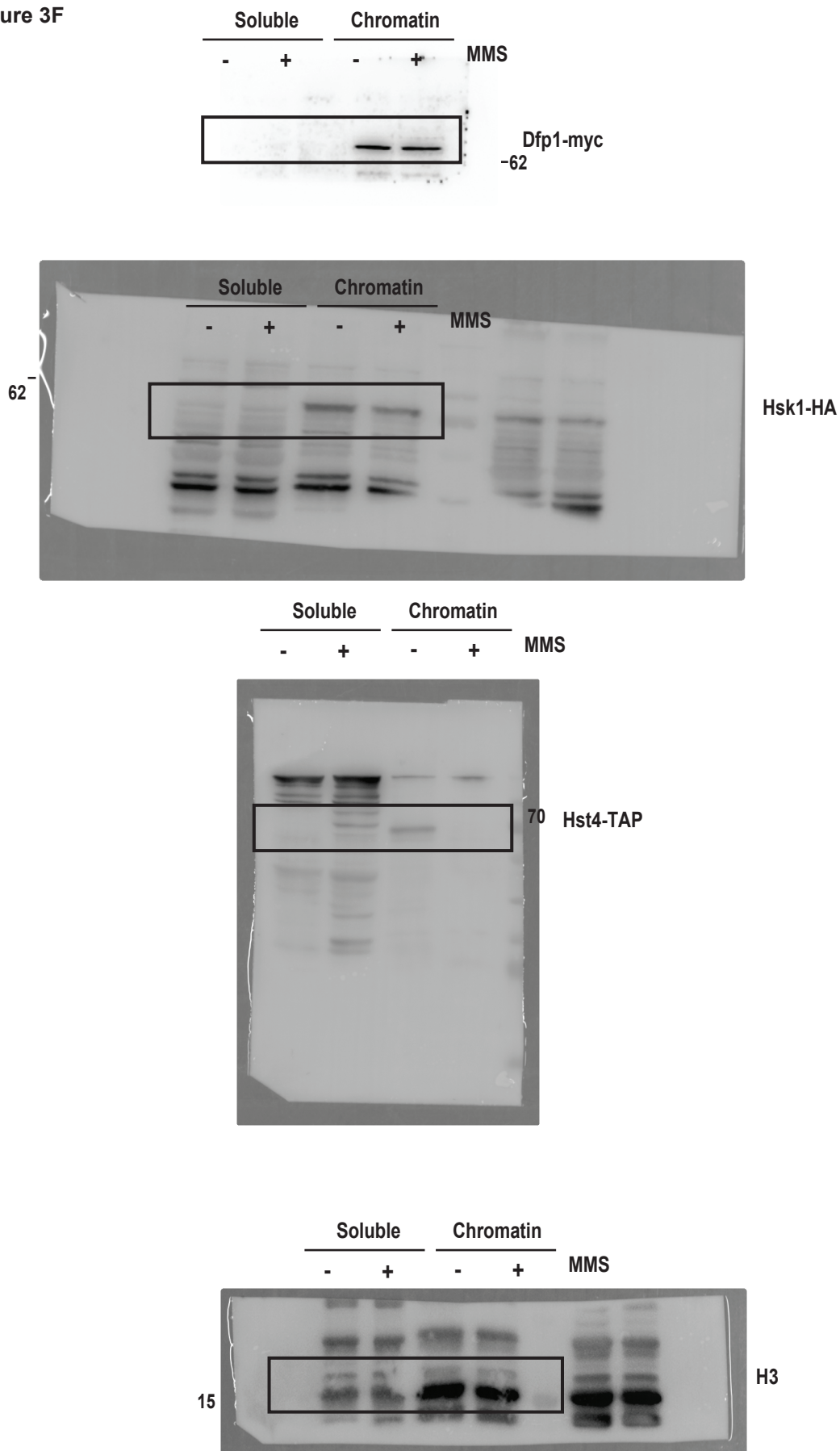


Figure 3G

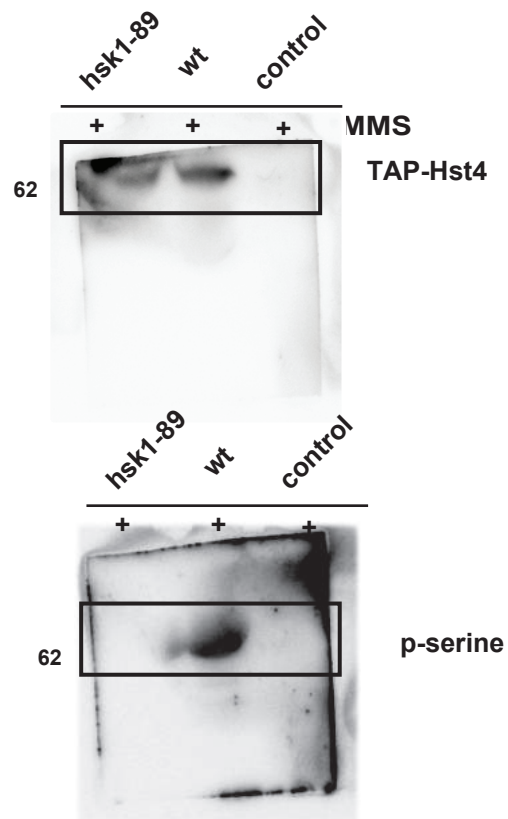


Figure 3-source data 1

Figure 3H

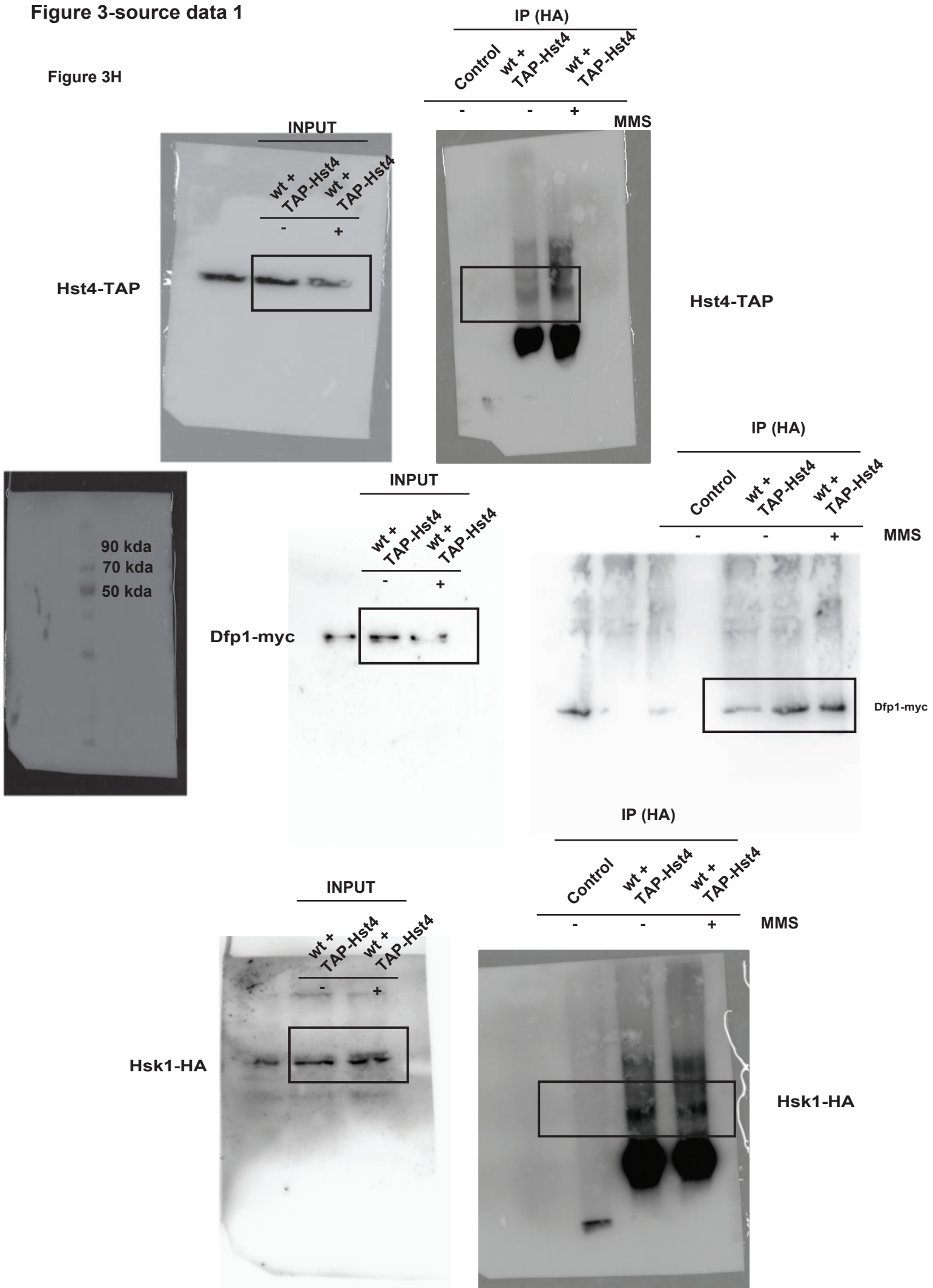


Figure 3-source data 1

Figure 3I

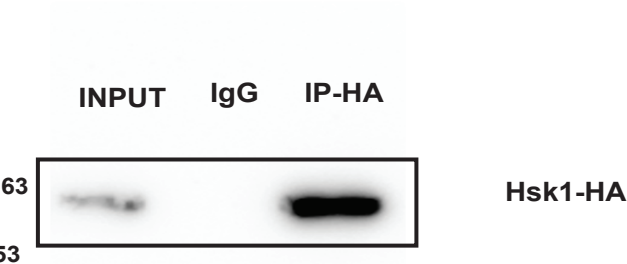
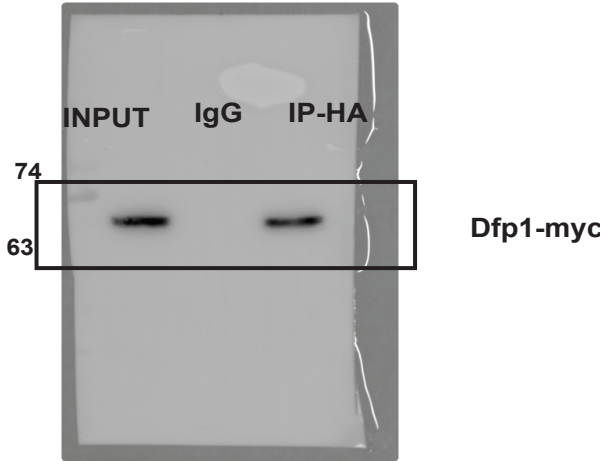
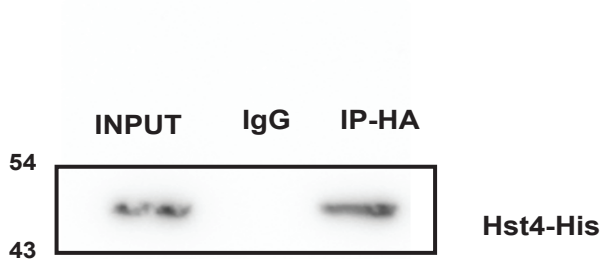


Figure 3-source data 1

Figure 3J

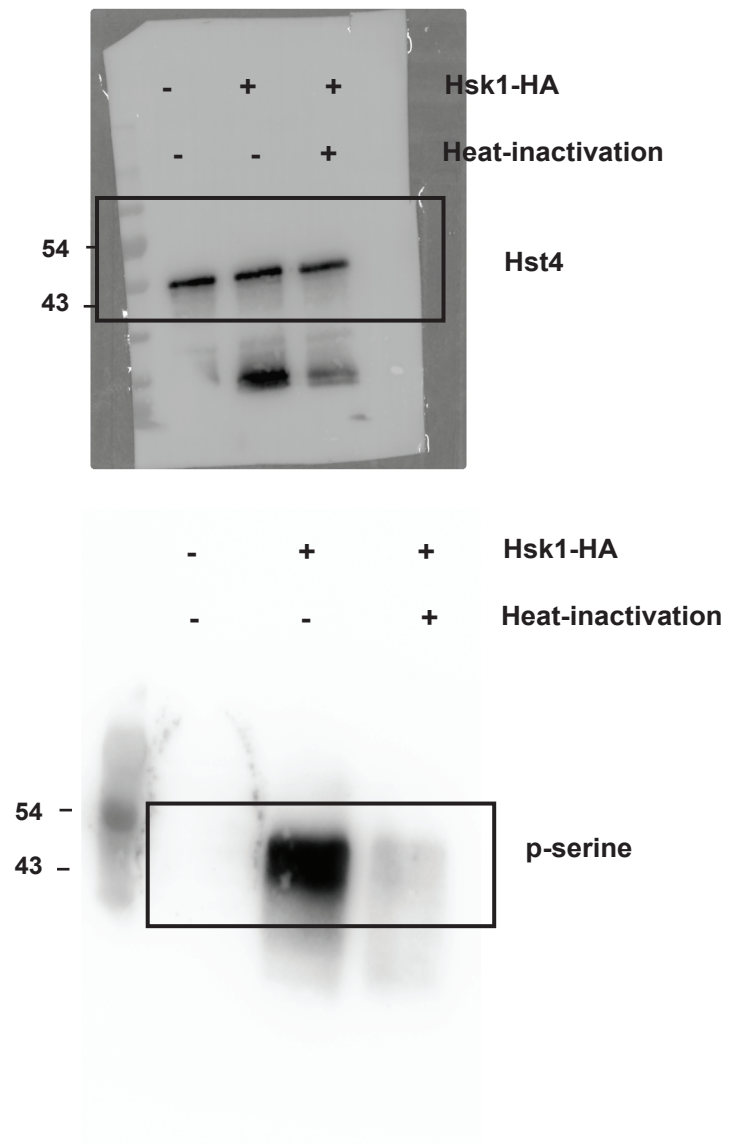


Figure 3-figure supplement 1-source data 1

Figure 3-Figure Supplement 1A

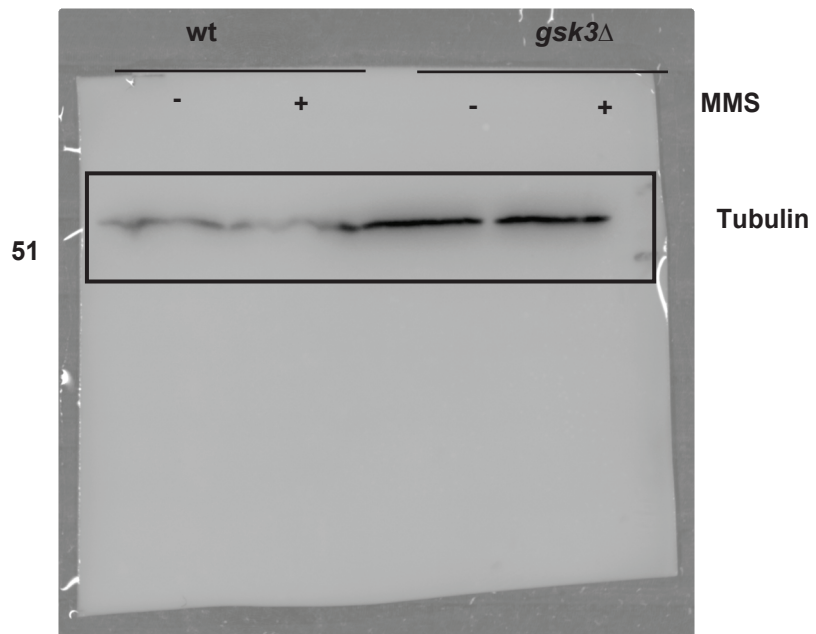
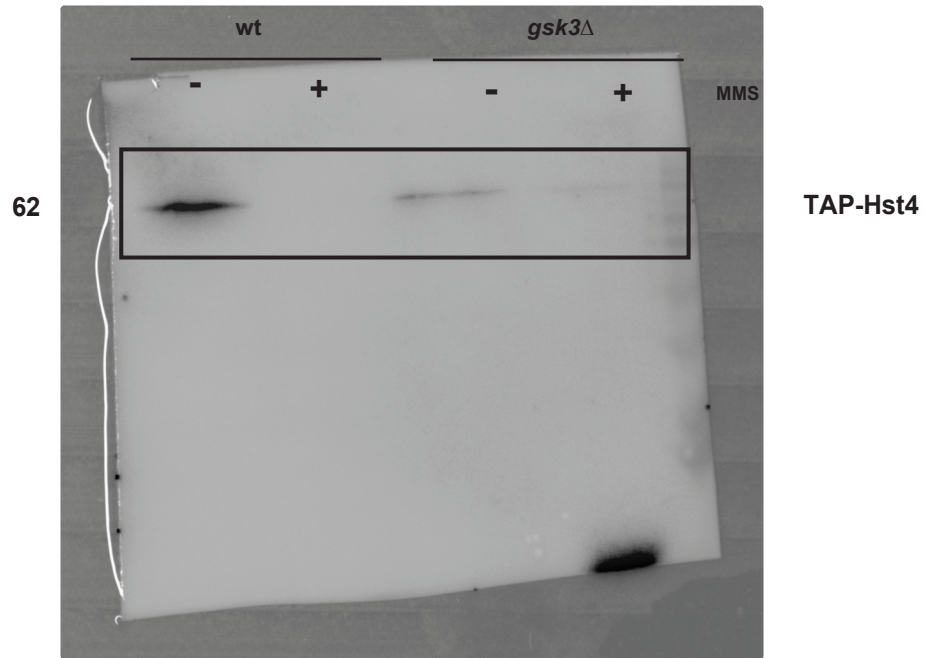


Figure 3-figure supplement 1-source data 1

Figure 3-Figure Supplement 1B

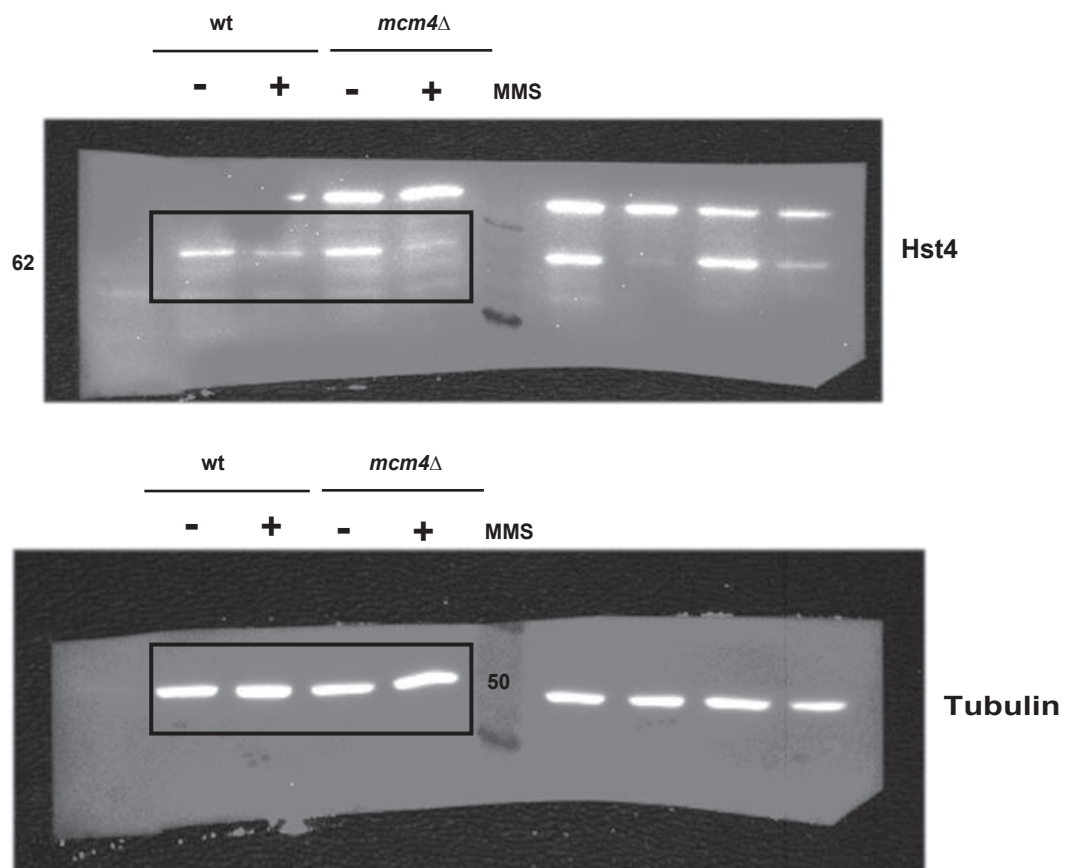


Figure 3-figure supplement 1-source data 1

Figure 3-Figure Supplement 1C

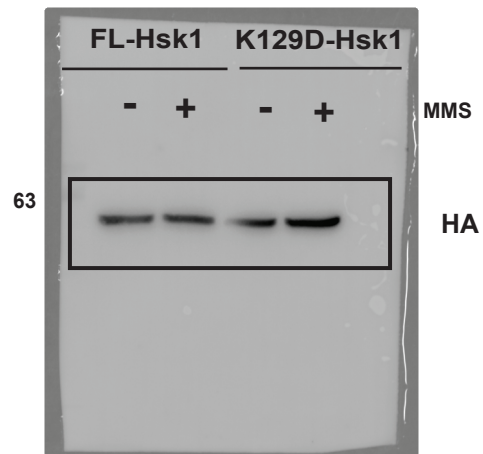


Figure 4D

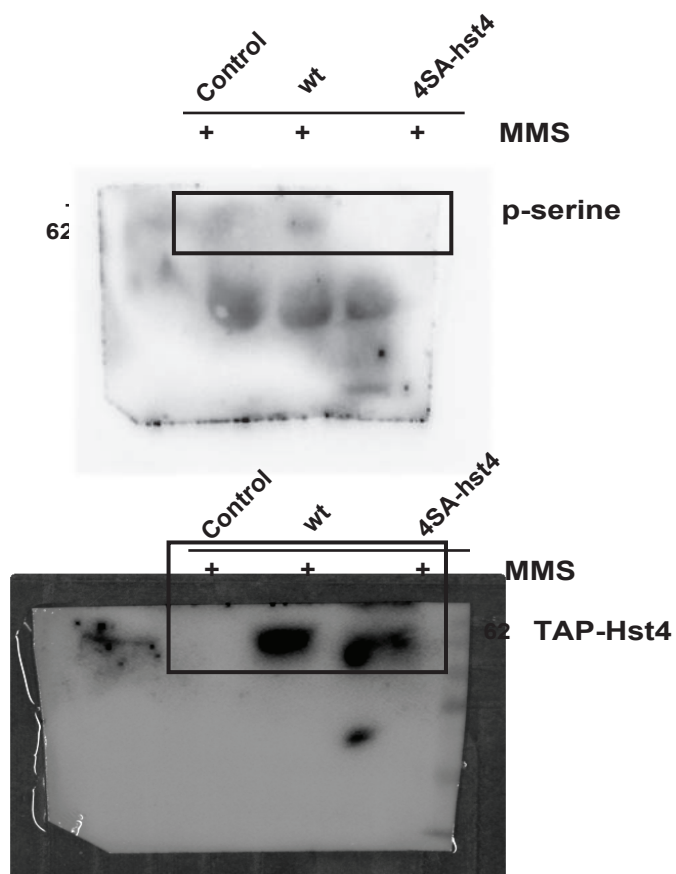


Figure 4-source data 1

Figure 4E

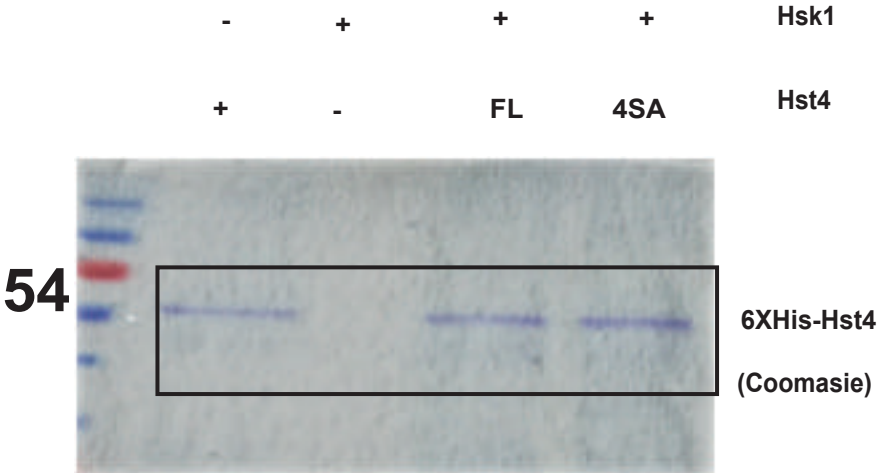


Figure 4-supplemental 1-source data 1

Figure 4-figure supplement 1B

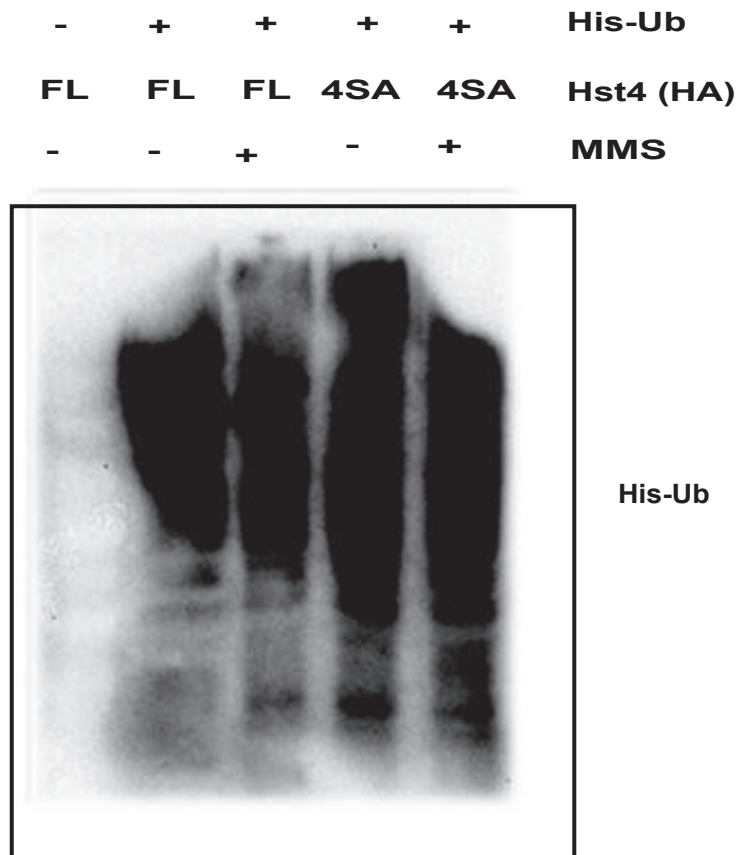
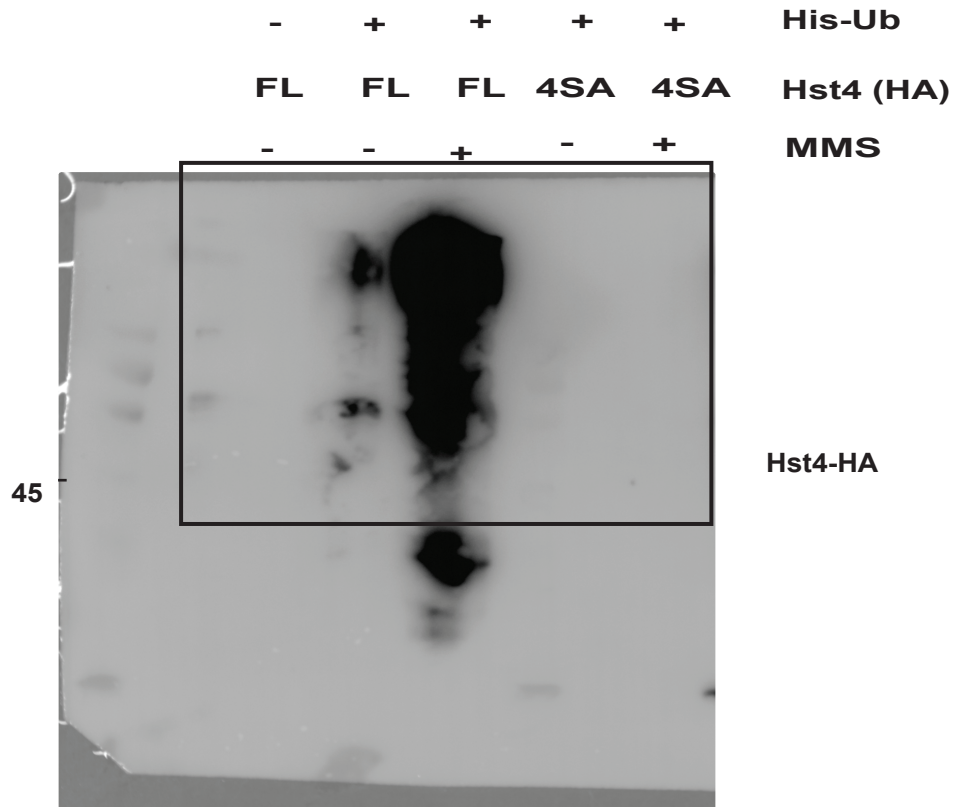


Figure 5-source data 1

Figure 5A

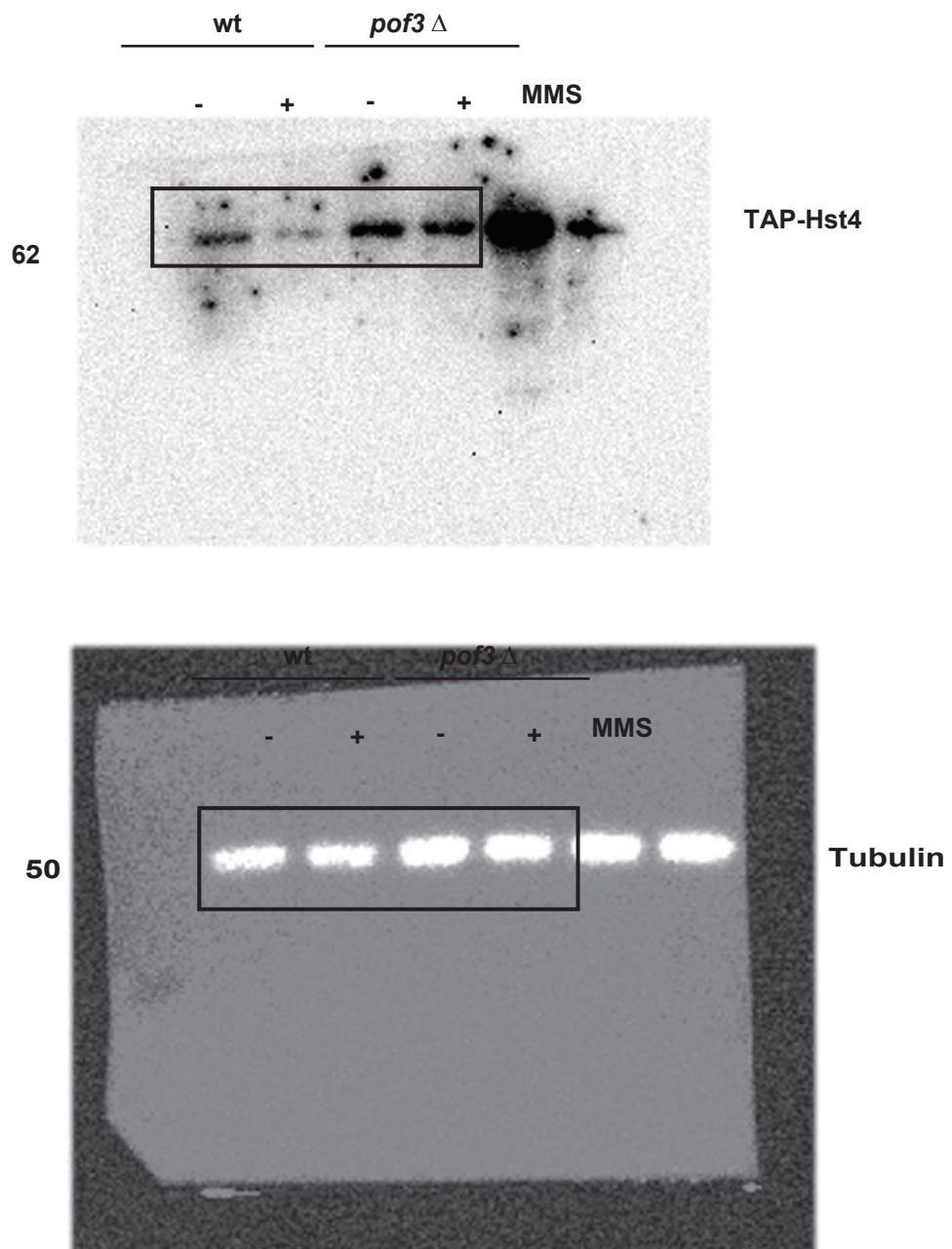


Figure 5-source data 1

Figure 5B

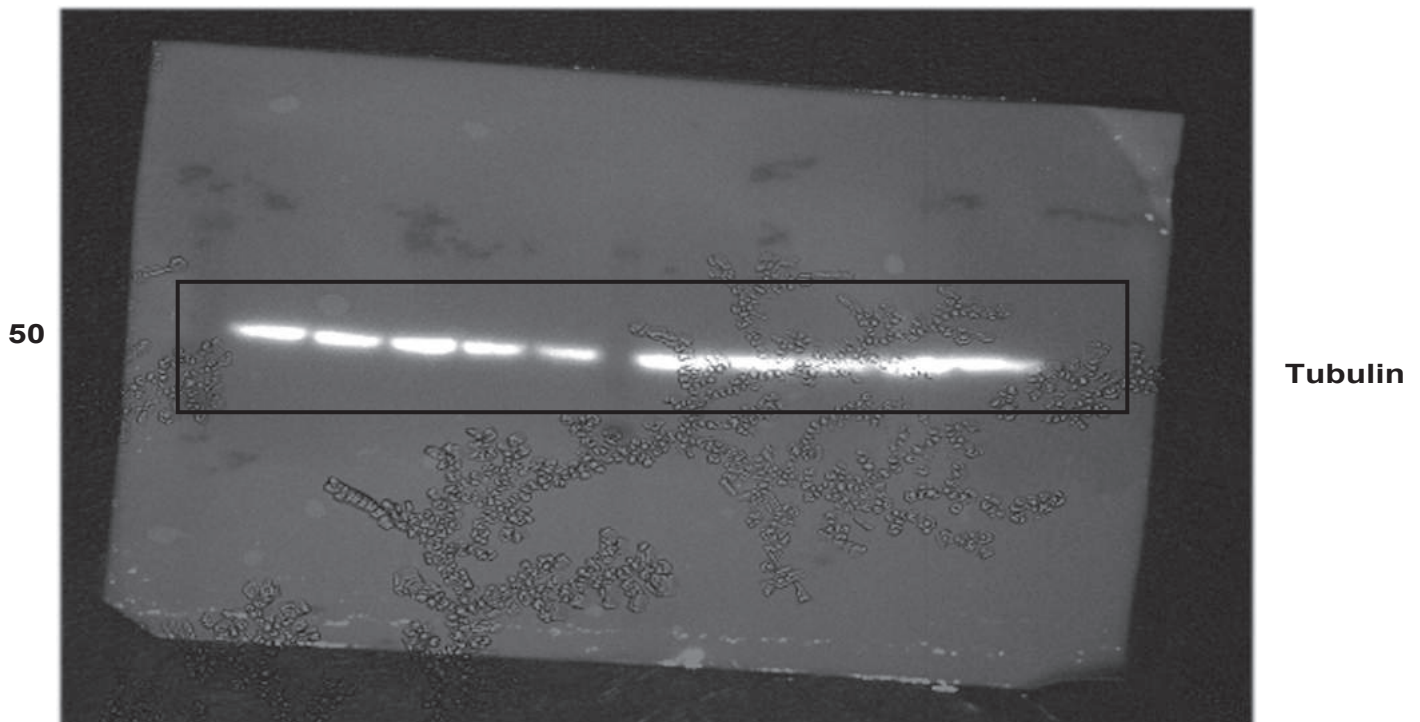
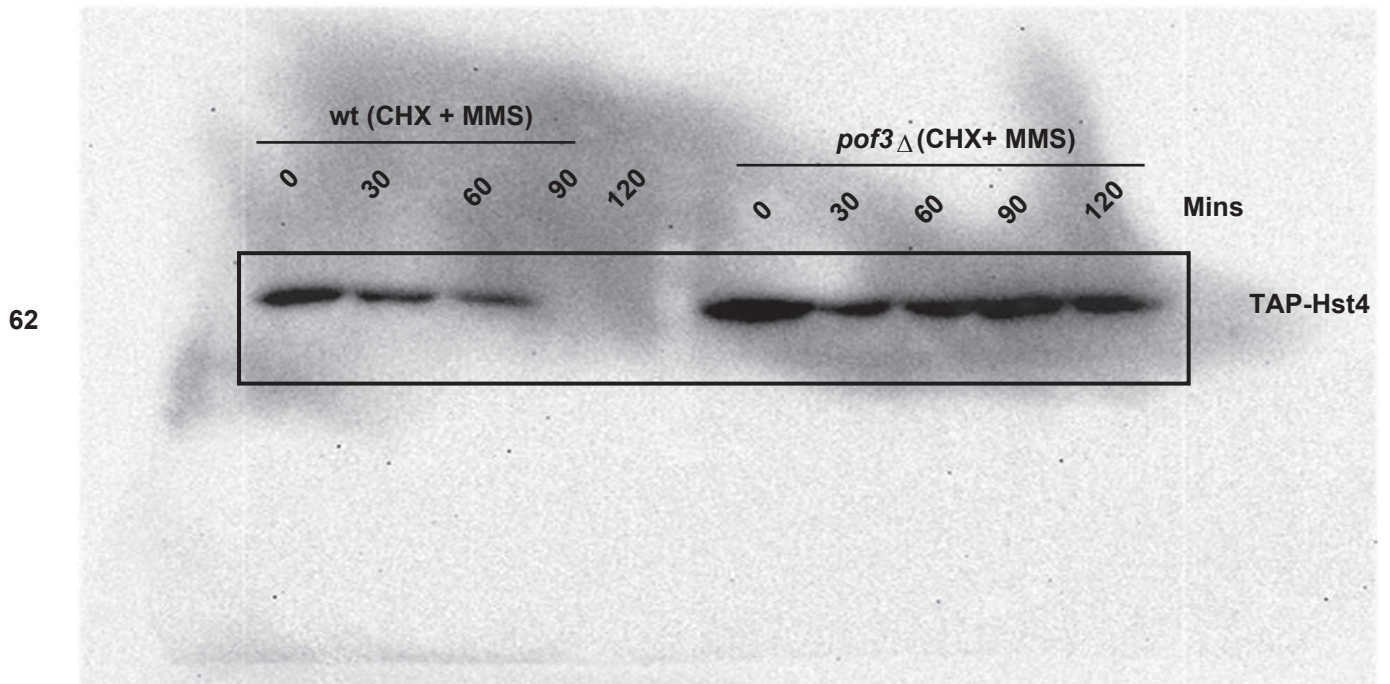


Figure 5C

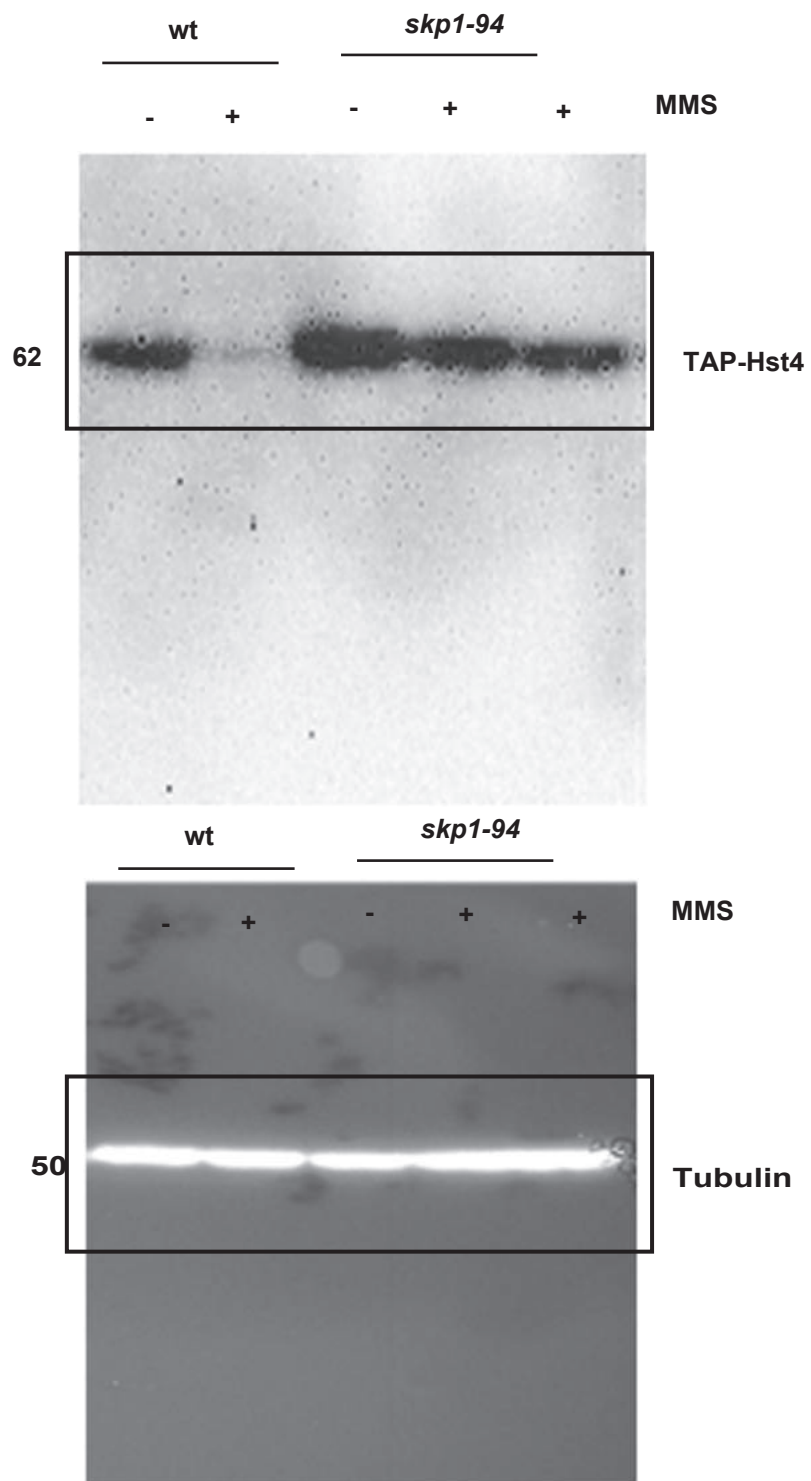


Figure 5-source data 1

Figure 5E

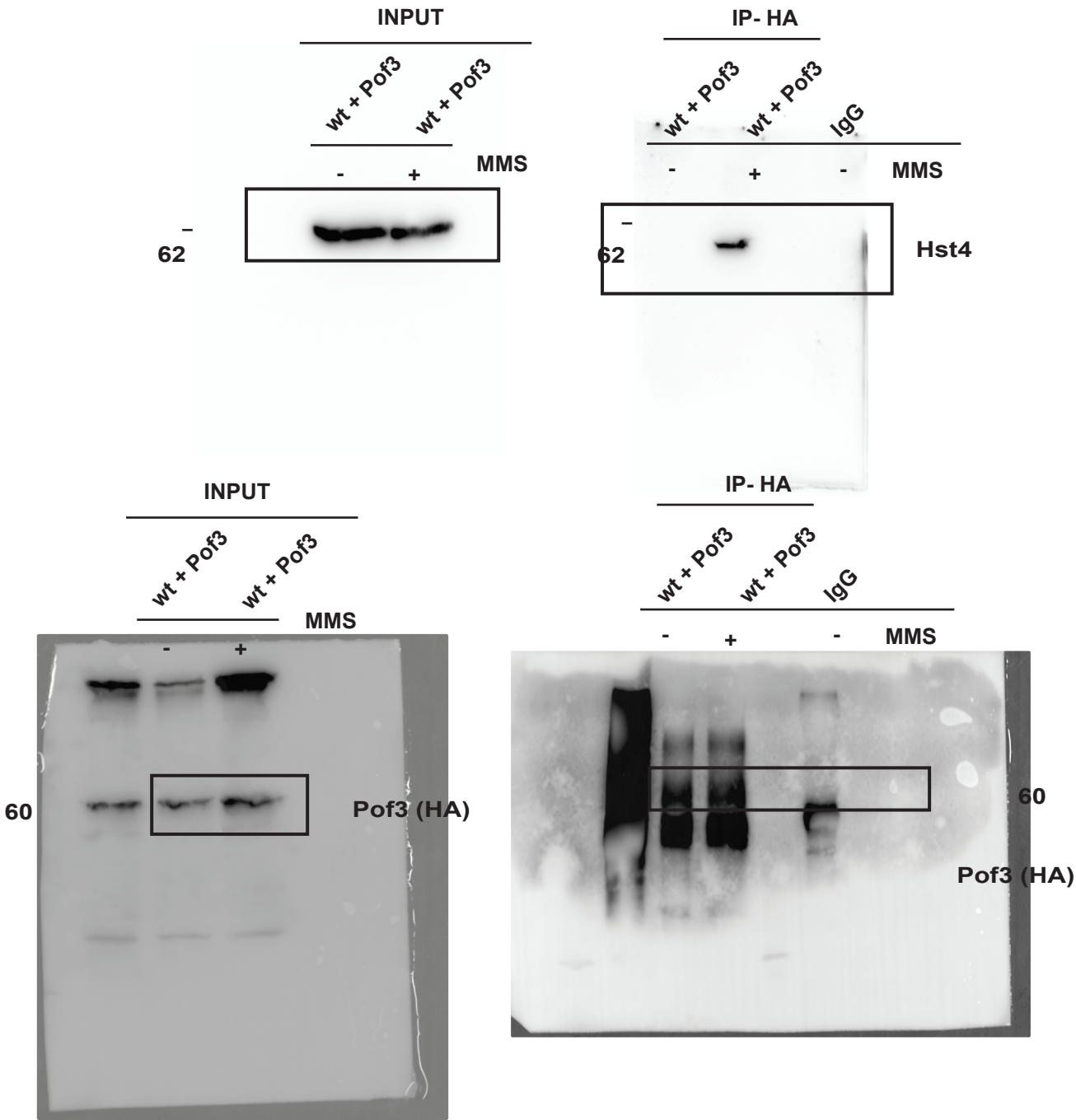


Figure 5-Figure Supplement 1C

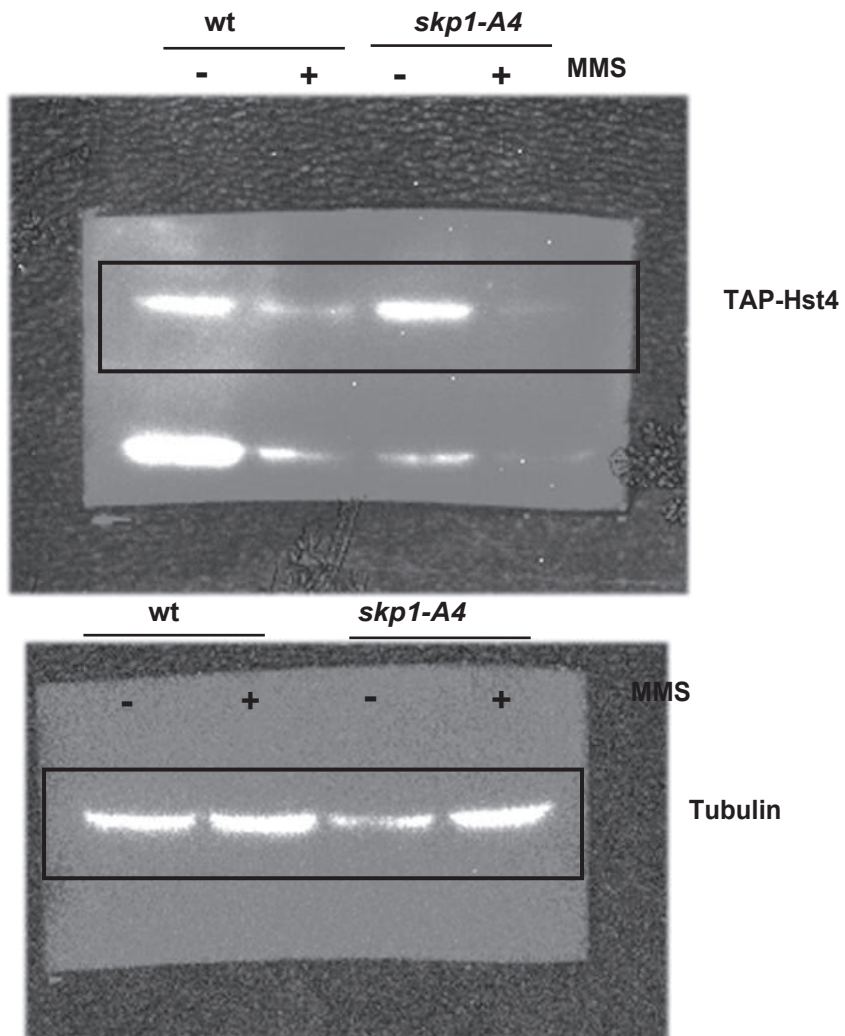


Figure 6-source data 1

Figure 6C

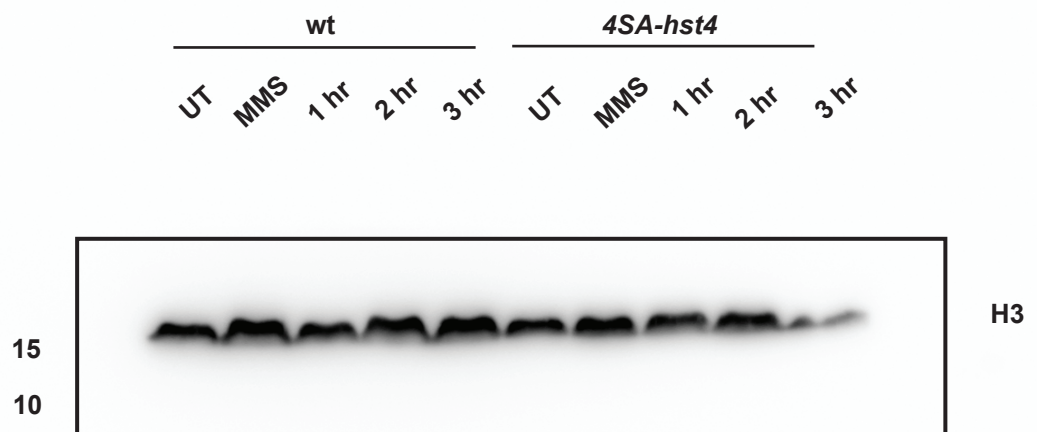
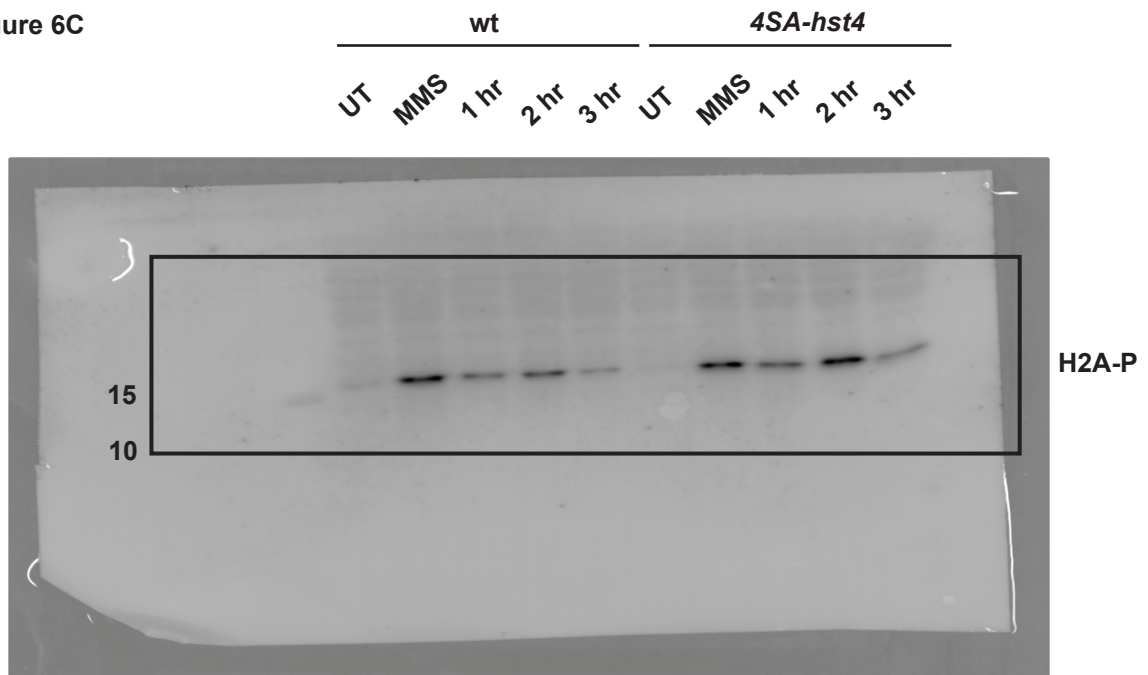


Figure 7-source data 1

Figure 7B

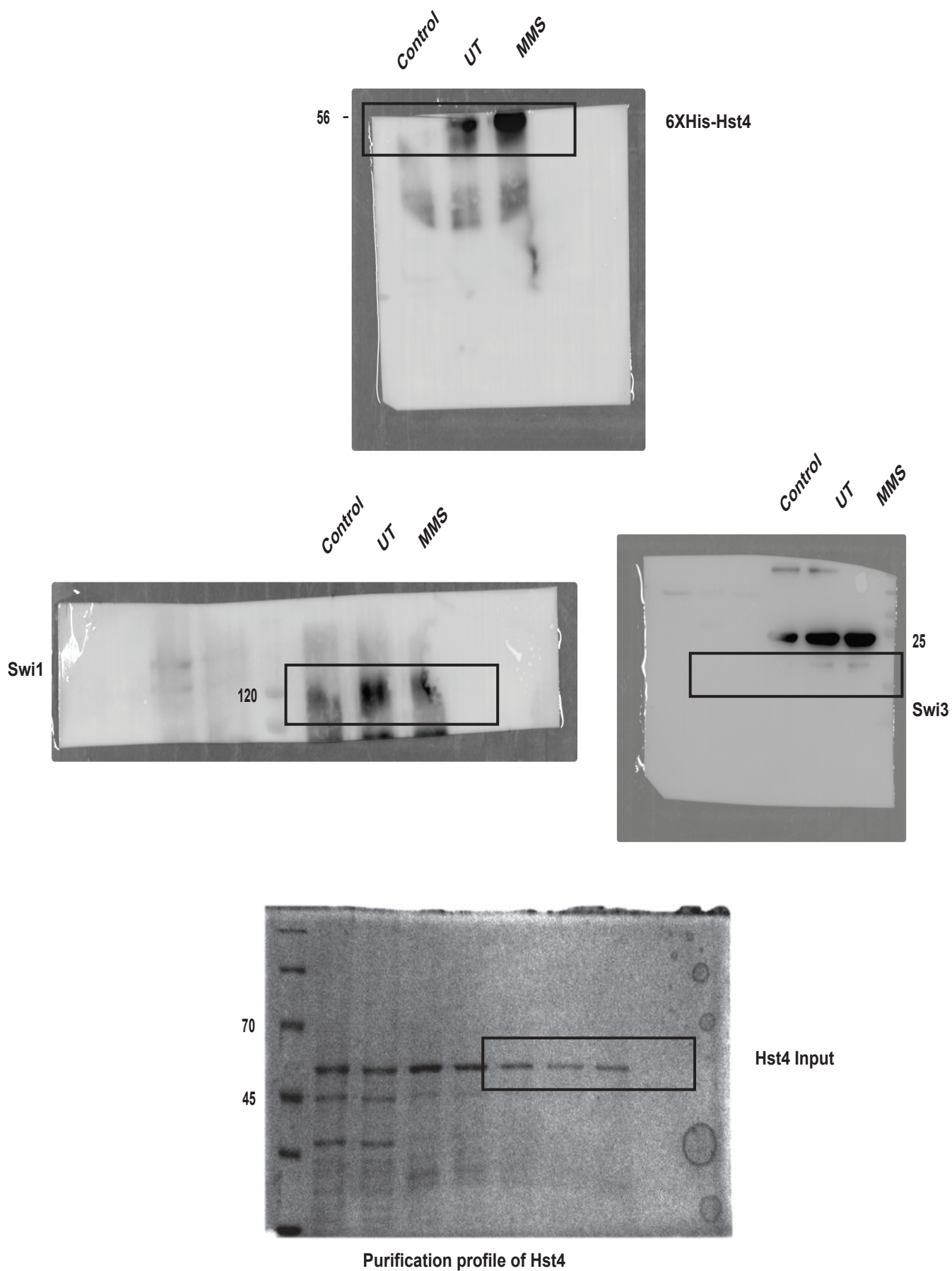


Figure 7-source data 1

Figure 7C

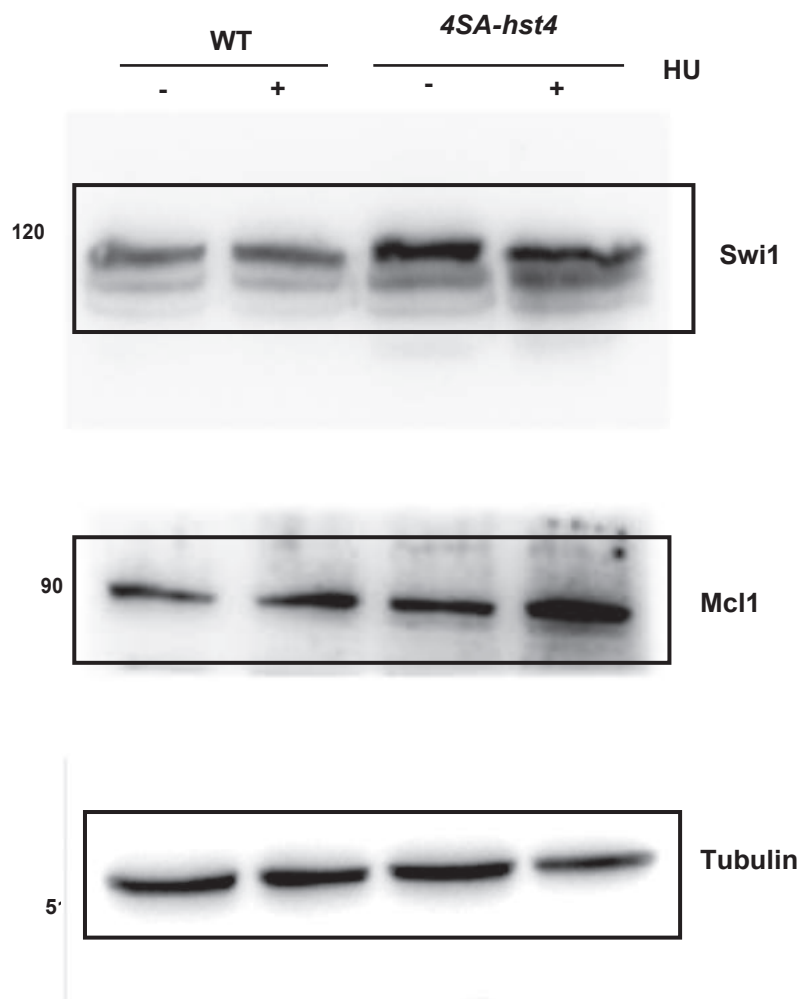


Figure 7-source data 1

Figure 7D

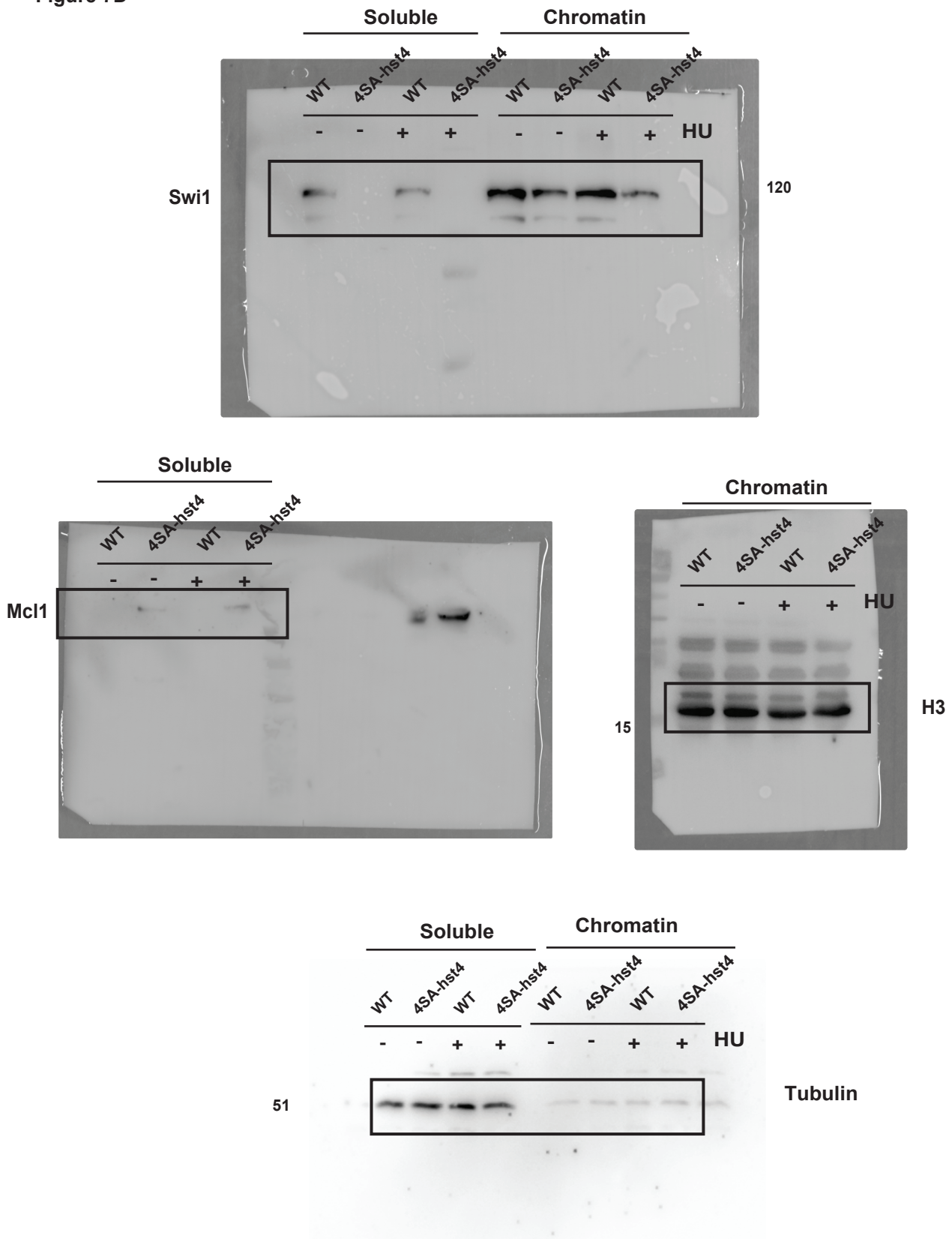


Figure 7-source data 1

Figure 7F

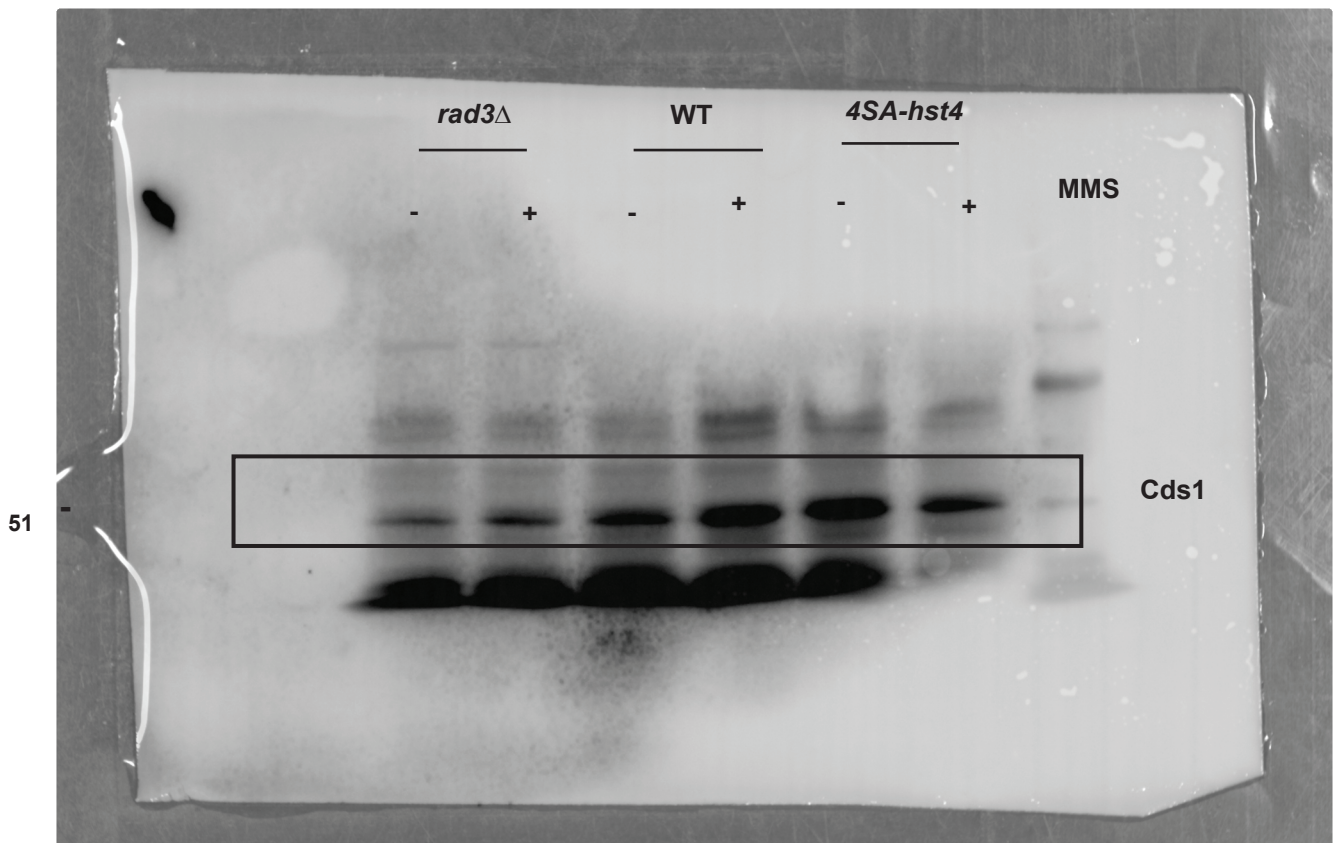
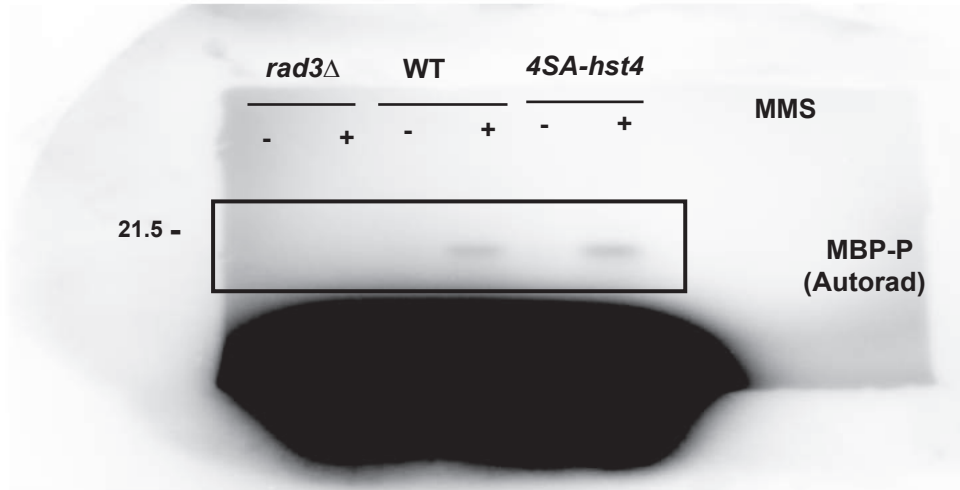


Figure 7-figure supplement 1-source data 1

Figure 7-figure supplement 1D

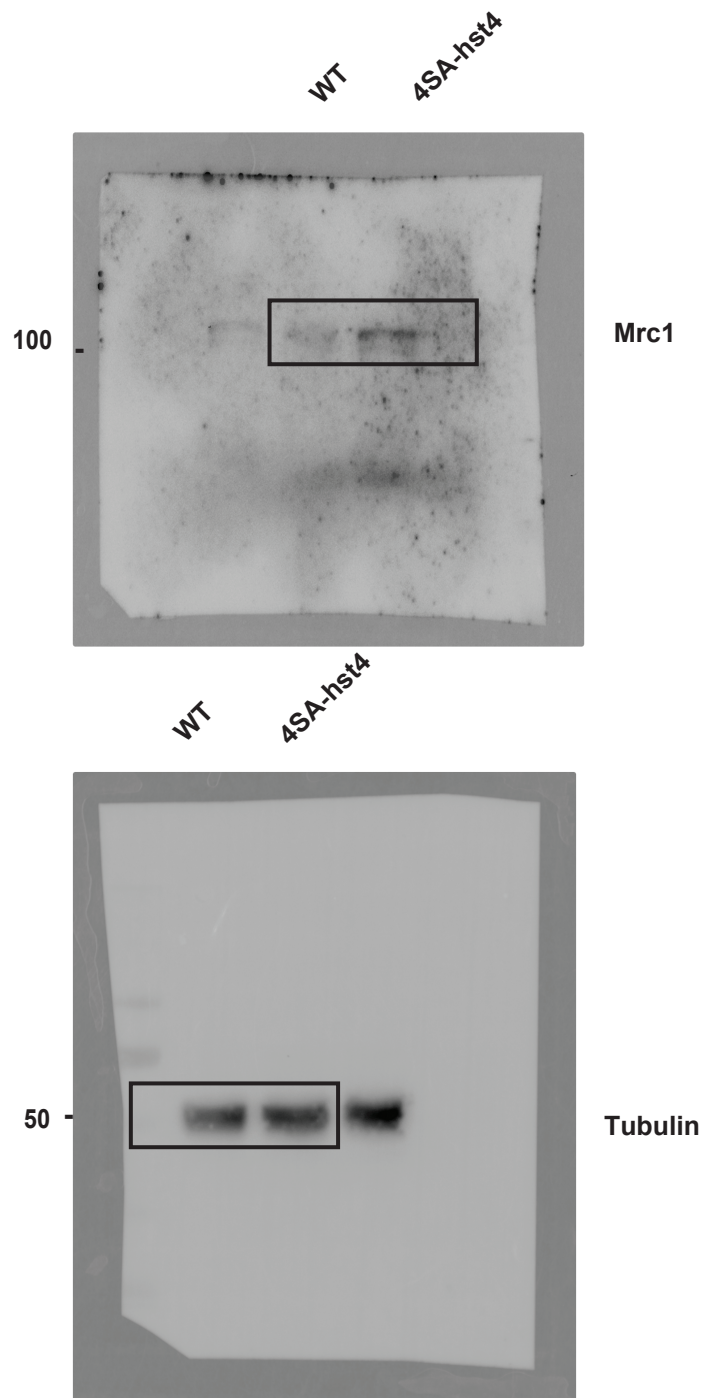


Figure 7-figure supplement 1E

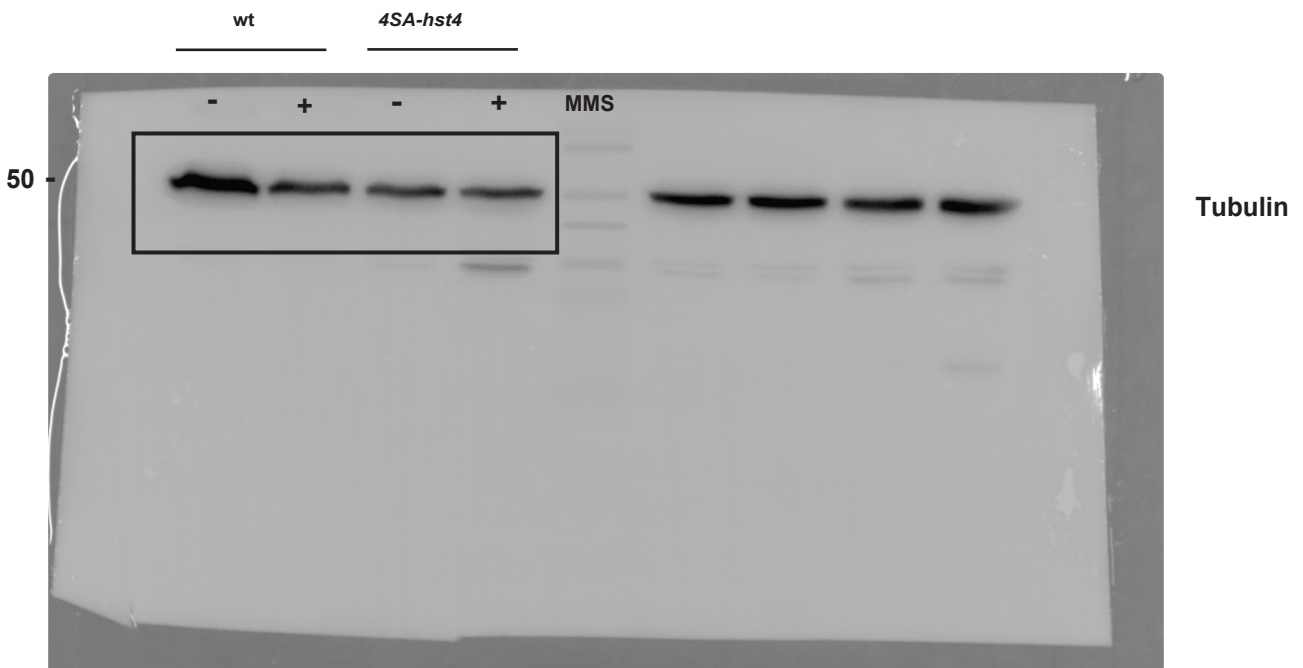
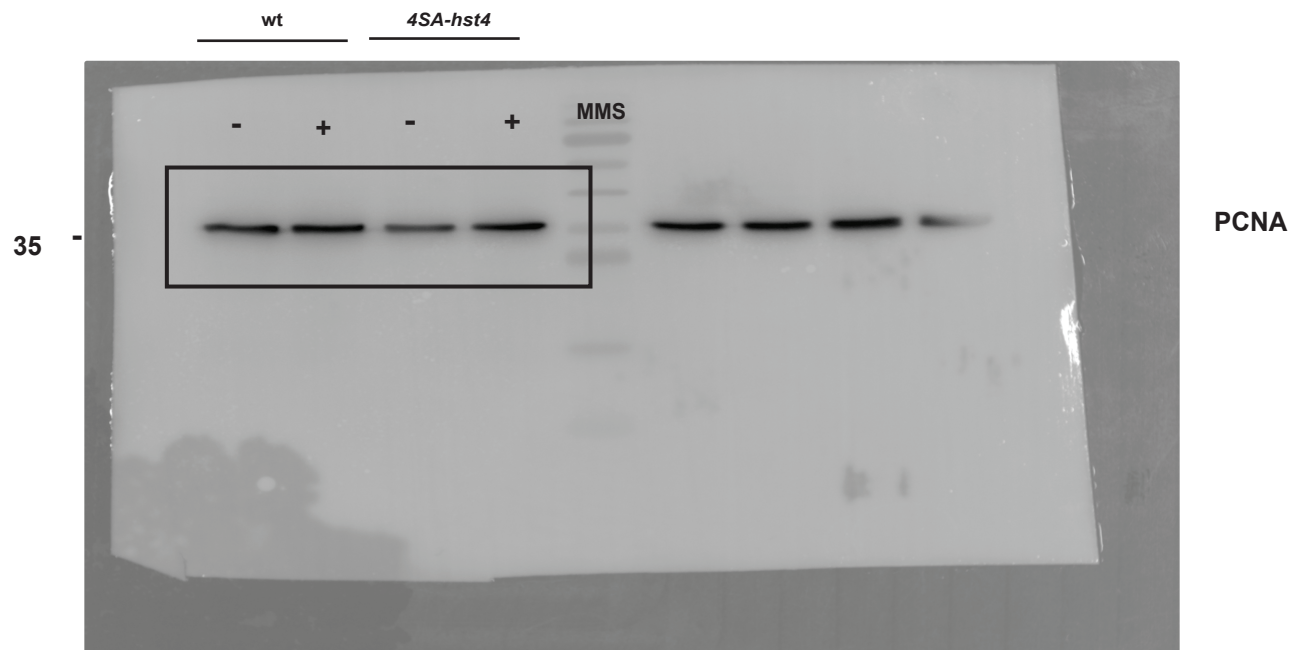


Figure 7-figure supplement 1-source data 1

Figure 7-figure supplement 1F

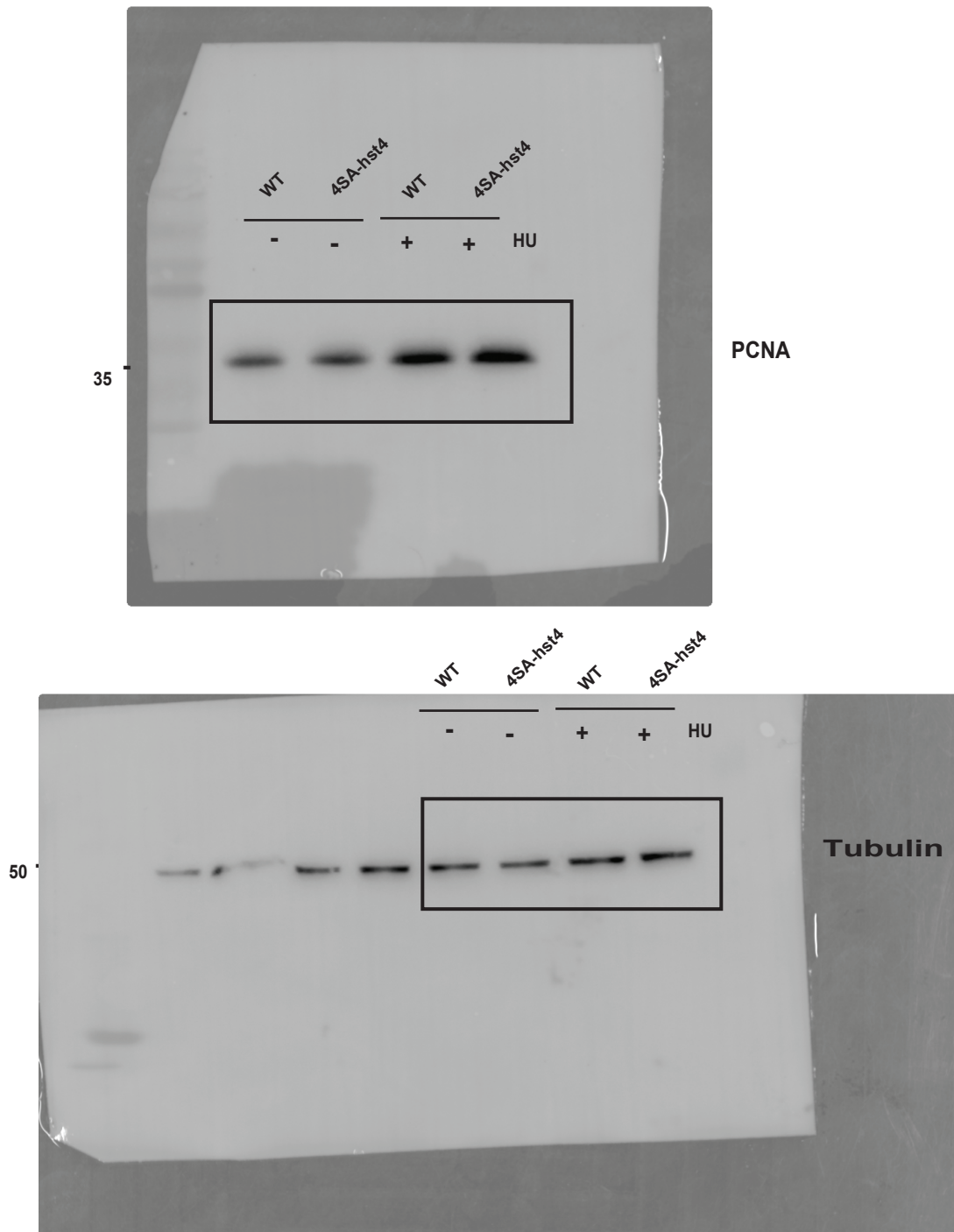


Figure 8-source data 1

Figure 8A

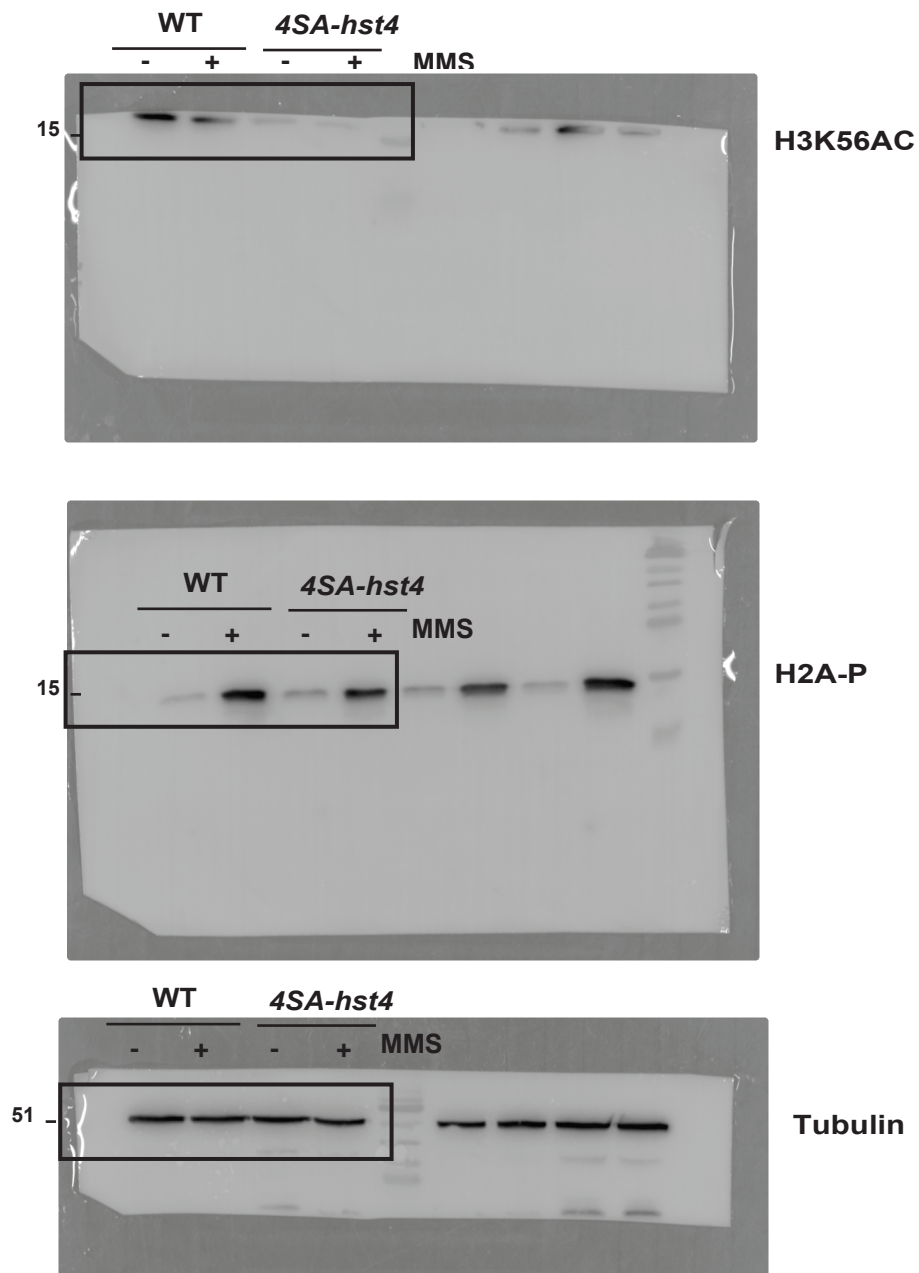


Figure 8-source data 1

Figure 8B

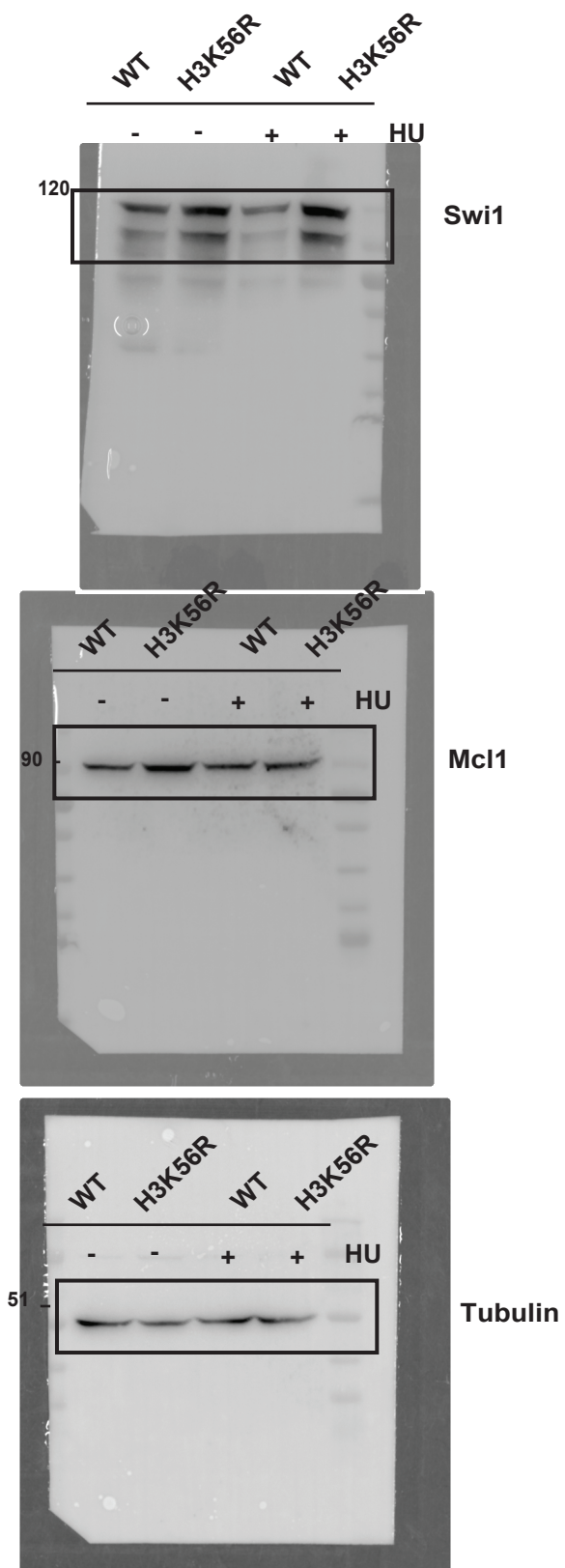


Figure 8-source data 1

Figure 8C

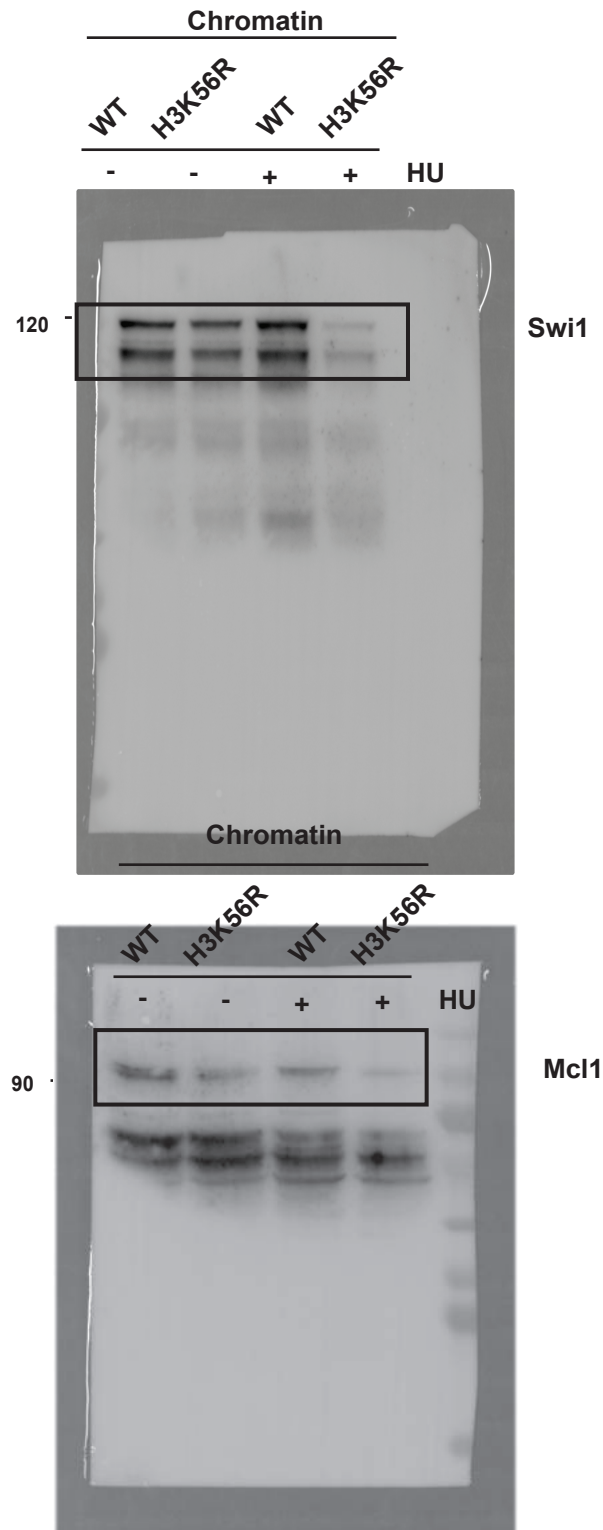


Figure 8-source data 1

Figure 8D

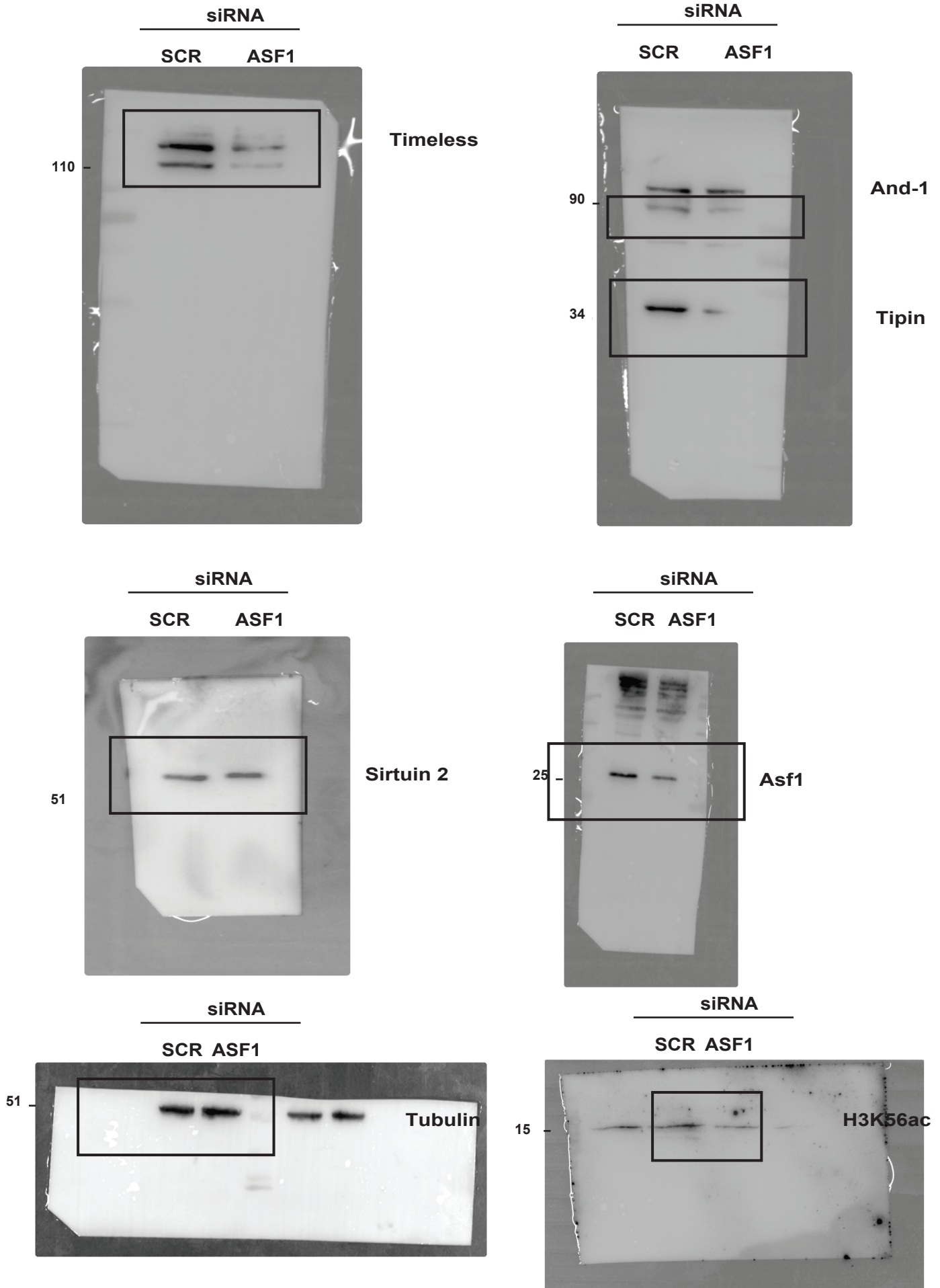


Figure 8-source data 1

Figure 8E

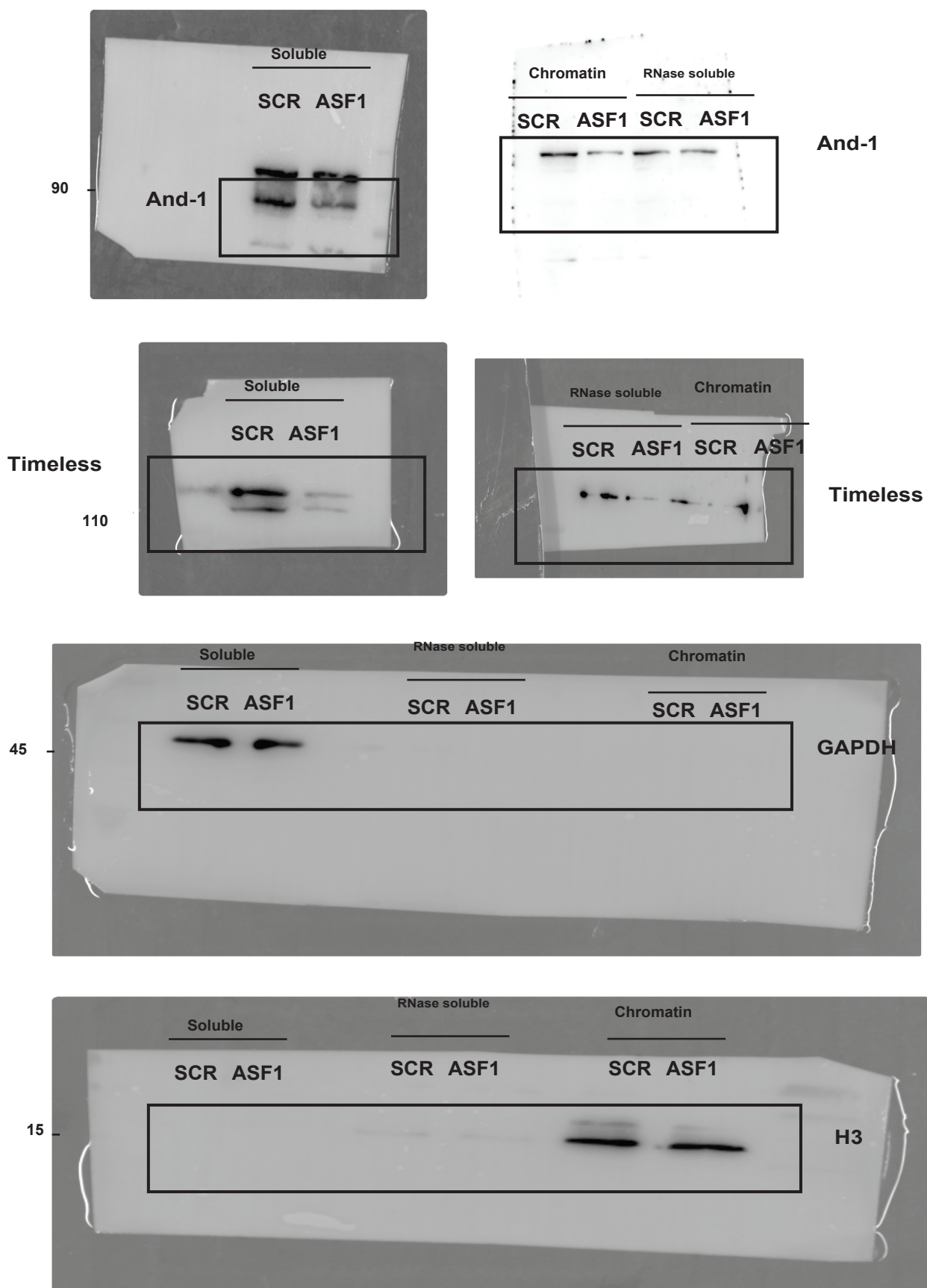


Figure 8-figure supplement 1-source data 1

Figure 8-figure supplement 1A

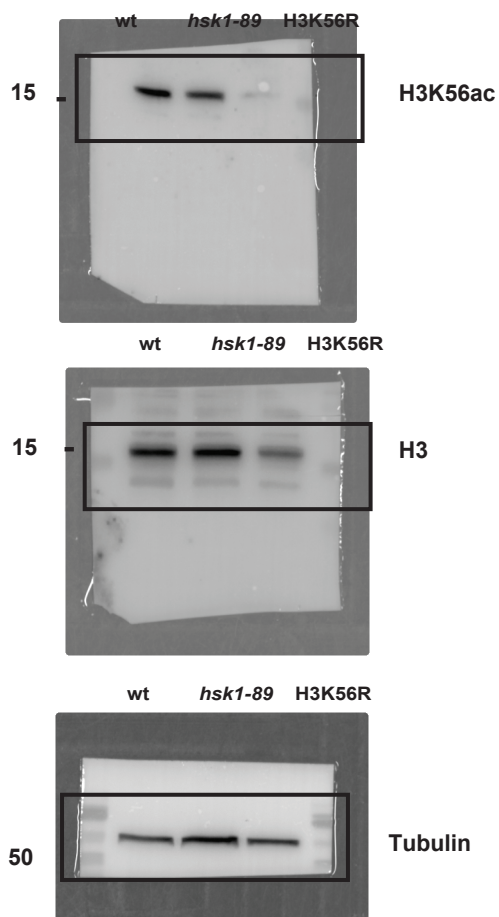
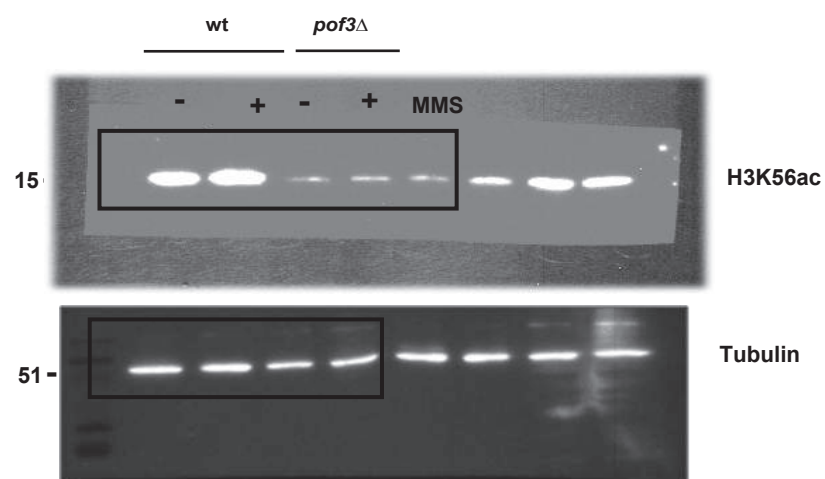


Figure 8-figure supplement 1-source data 1

Figure 8-figure supplement 1B



CellSure-Human: Human Cell line Authentication Service

Report

Project ID: M-1083
Service Code: LC-M-321
Reference PO No:
Service Order Form Dated: 17/08/2016
Date 08/09/2016
Prepared For Dr. Rashna Bhandari
Laboratory of Cell Signalling, CDFD
Laboratory building, Tuljaguda complex,
4-1-714, Mozamjahi Road, Nampally
Hyderabad-500001
Prepared By Gaurave Bhatt
Reviewed By Jameel Ahamd Khan, PhD



Lifecode Technologies Private Limited
A5, Mohan Co-operative Industrial Estate, Mathura Road, New Delhi-110 044 (INDIA)
Email: info@lifecode.in | Phone: +91-11-41 306 509

Sample Information

Sample Type	Cells suspended in Transport Buffer
Sample IDs	1. RB-1
Shipping Method	Sample received through courier at room temperature
Receiving Date:	22/08/2016
Report submission date	08-09-2016

Methodology

The total cellular DNA was isolated using our standard protocol. For STR profiling, total ten Genetic loci viz: TH01, D21S11, D5S818, D13S317, D7S820, D16S539, CSF1PO, AMEL, vWA and TPOX were PCR amplified by labelled primers specific to repetitive loci. The labelled amplicons were resolved by capillary electrophoresis and alleles were called. The sample genotypes were compared with reference STR genotypes available in ATCC®, DSMZ® and Biosample databases to authenticate sample identity and check for cross contamination.

Results

Genotypes:

S. No	Sample ID	Cell Line Name	Ref Db ID		D5S818	D13S317	D7S820	D16S539	vWA	TH01	AMEL	TPOX	CSF1PO	D21S11	% Match with Ref.
1.	RB-1	U-2 OS	HTB-96	Ref. Genotype (ATCC & Biosample)	11	13	11, 12	11, 12	14, 18	6, 9.3	X	11, 12	13	31	
				Sample Genotype	11	13	11, 12	11, 12	14, 18	6, 9.3	X	11, 12	12, 13	31	93.75
2.	Pos Ctrl	2800M	-	Ref. Genotype (Promega)	12	9, 11	8, 11	9, 13	16, 19	6, 9.3	X, Y	11	12	29, 31.2	
				Sample Genotype	12	9, 11	8, 11	9, 13	16, 19	6, 9.3	X, Y	11	12	29, 31.2	100

Comments:

1. **RB-1:** The STR marker profile of the sample matches with **93.75 % markers** of reference marker profile of U-2 OS (ATCC ID: HTB-96) cell line in NCBI-Biosample and **93.33%** markers in ATCC database (please also see additional data). According to ATCC guidelines >80 % match **may be considered to be authenticated.**

However, it should be noted that the reason for not getting perfect (100 %) match is because of loss and/or gain of alleles at loci: CSF1PO (please see the highlighted markers in above table). This could be either because of sample from very high passage number or clonally selected cells, from a cell line of inherently very unstable genome. **For such cell lines, the STR profiling at regular intervals to check whether the current STR signature is maintained with increase in passage number of cells, is highly recommended.**

However, it may also be a potential case of cross-contamination and/or mislabelling and should be checked at a later passage especially if another cell line with related STR marker profile (please see DSMZ database search results in additional information) is being cultured in same lab. It may also be a laboratory developed cell line from patient samples which is not yet submitted in ATCC, DSMZ, JCRB and RIKEN databases and requires further characterization.

Date: 08-09-2016

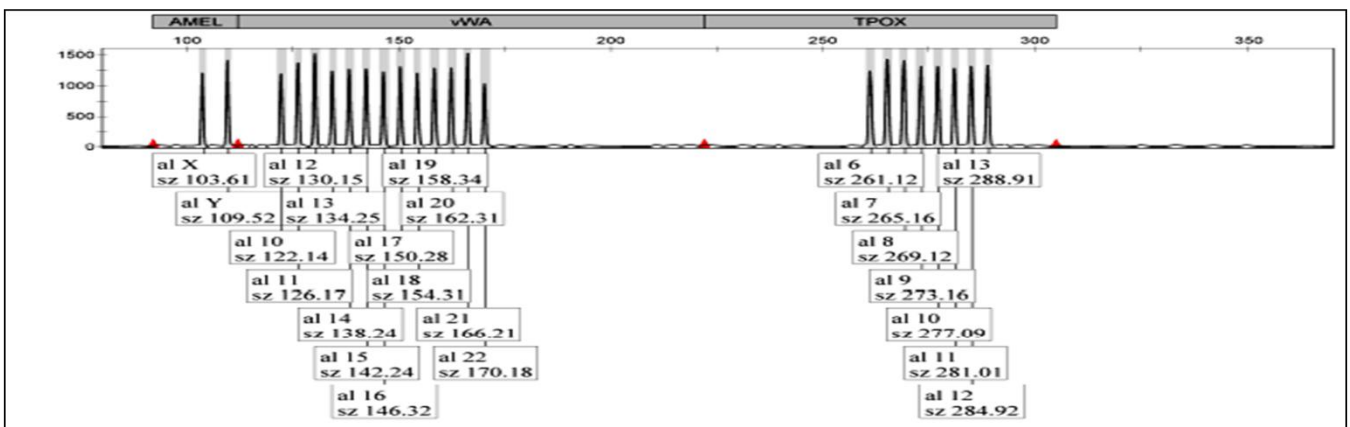
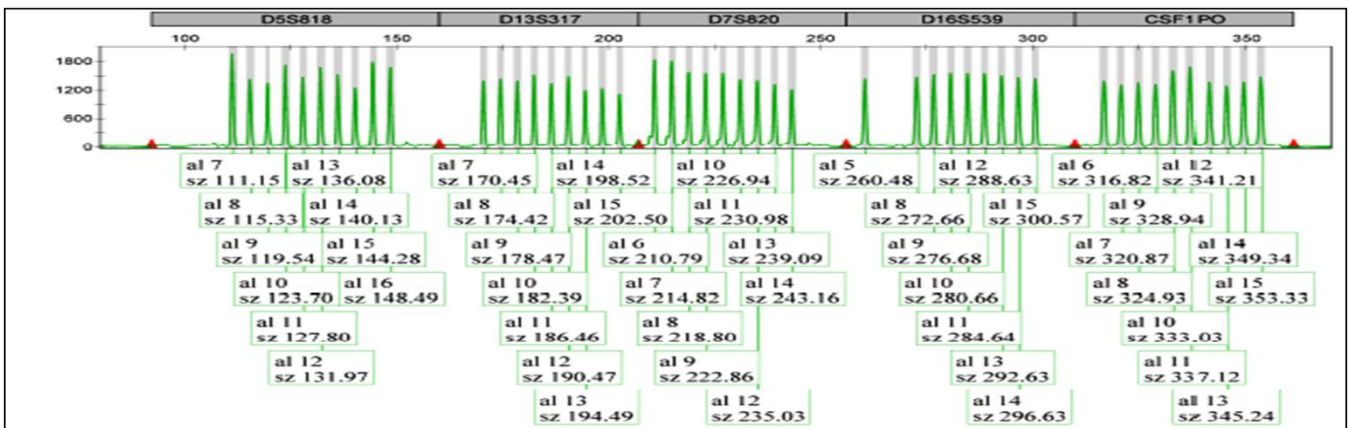
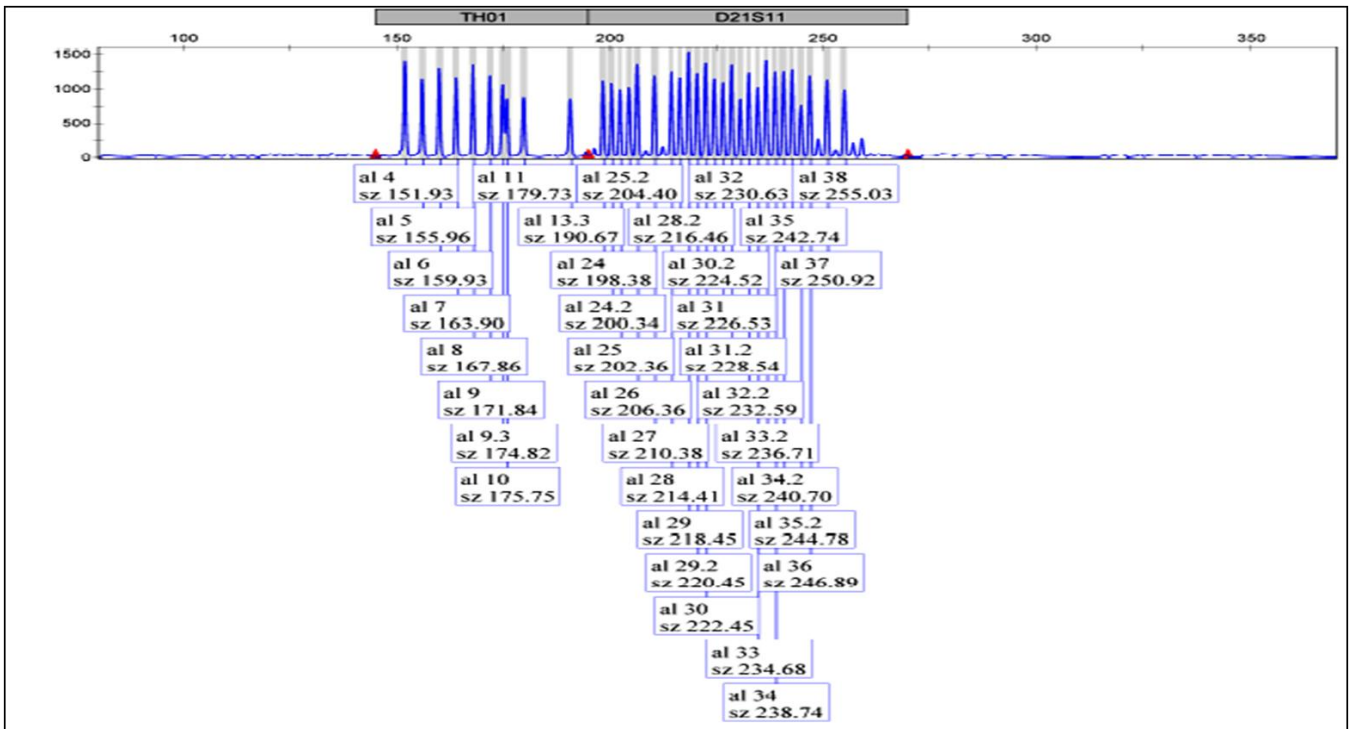
Jameel A. Khan, PhD

NOTE: THIS REPORT IS FOR RESEARCH PURPOSES ONLY. IT CAN NOT BE USED FOR TECHNO-LEGAL OR ANY OTHER PURPOSES.

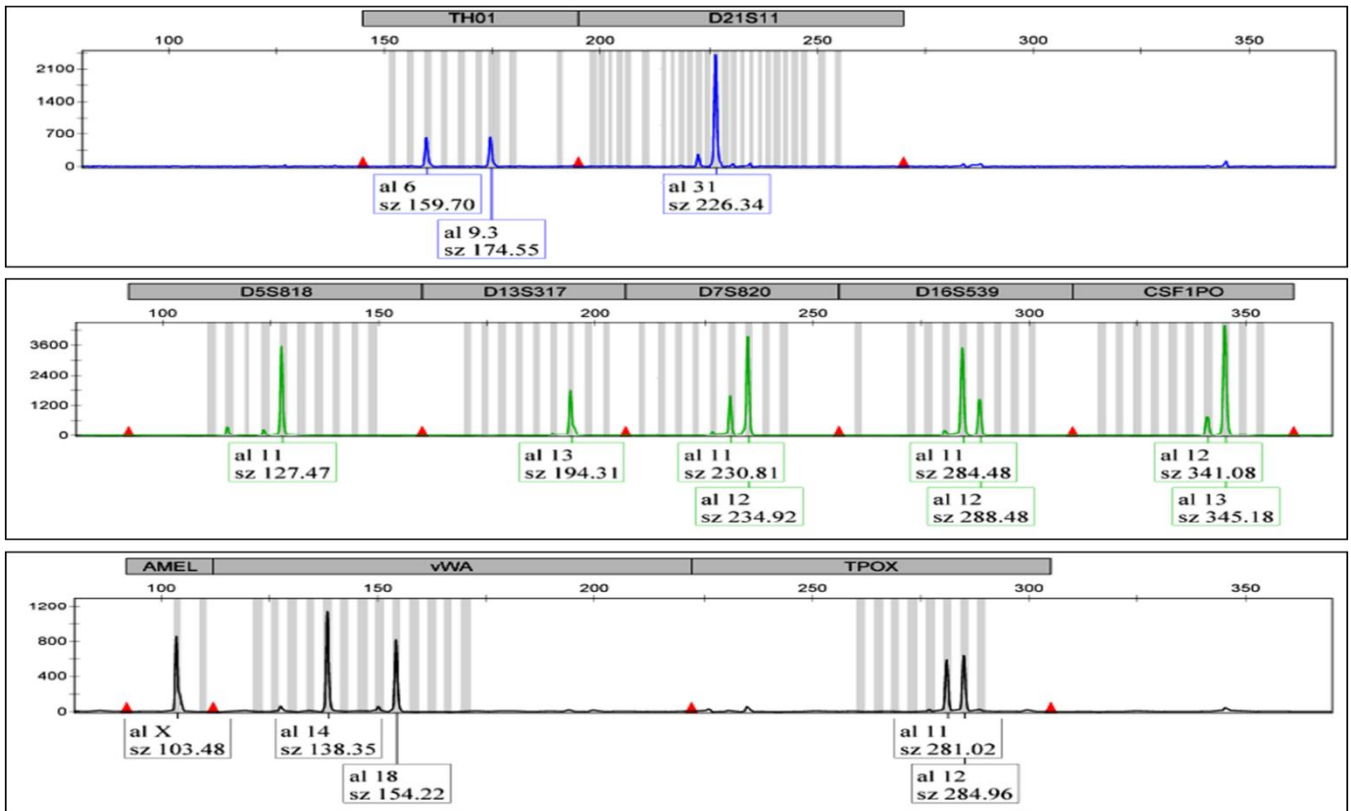
Additional Data

Chromatograms

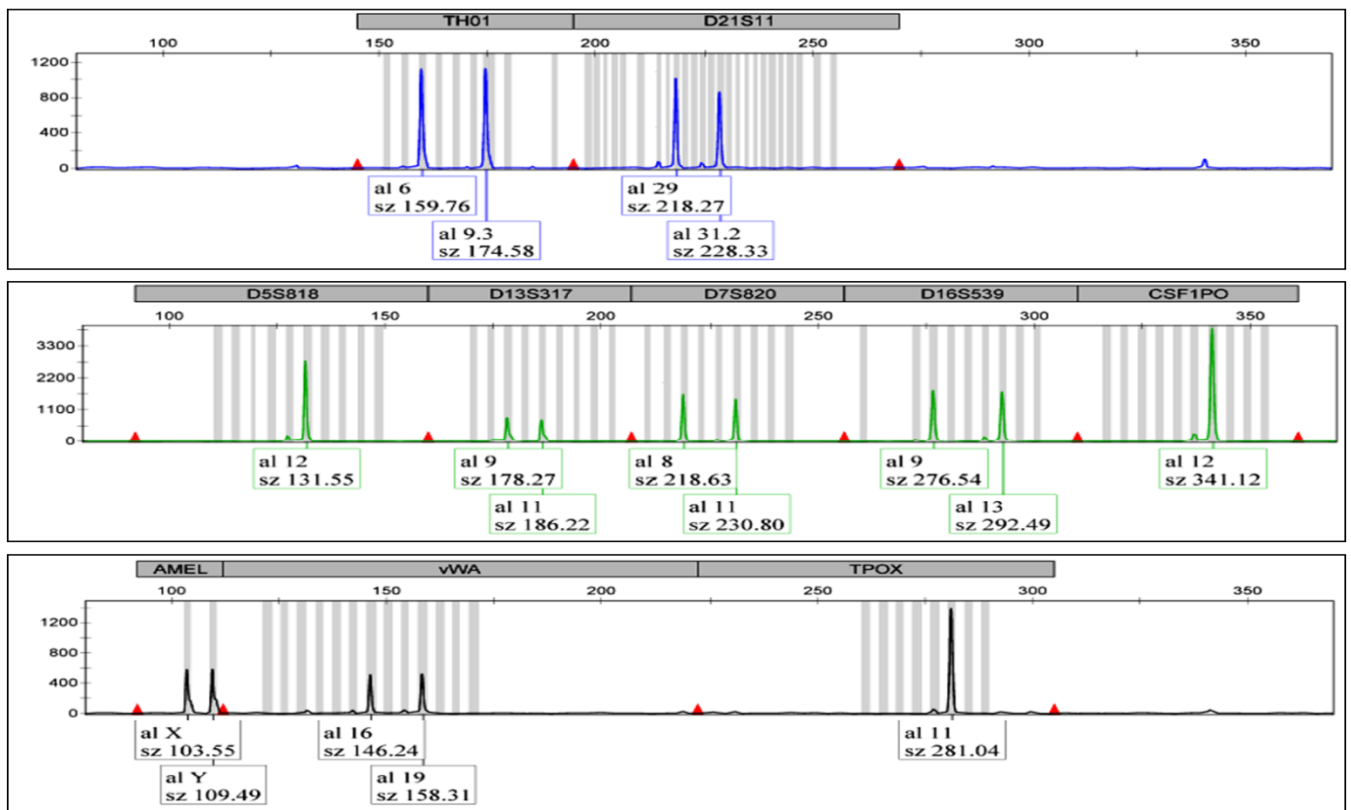
Allelic Ladder



1- RB-1



2- Positive Ctrl



Database Search Results: ATCC

1- RB-1

S. No.	% Match	No of Matches	ATCC Number	Designation	D5S818	D13S317	D7S820	D16S539	vWA	TH01	AMEL	TPOX	CSF1PO
			RB-1 (sample genotype)		11	13	11, 12	11, 12	14, 18	6, 9.3	X	11, 12	12, 13
1	93.33	14	HTB-96	U-2 OS	11	13	11, 12	11, 12	14, 18	6, 9.3	X	11, 12	13
2	93.75	15	785	U-2-OS	8, 11	13	11, 12	11, 12	14, 18	6, 9.3	X	11, 12	12, 13

Database Search Results: DSMZ (top 30 hits)

1- RB-1

S. No.	EV (Expected Value)	Cell No.	Designation	D5S818	D13S317	D7S820	D16S539	vWA	TH01	AMEL	TPOX	CSF1PO
		RB-1 (sample genotype)		11	13	11, 12	11, 12	14, 18	6, 9.3	X	11, 12	12, 13
1	0.94(34/36)	785	U-2-OS	8, 11	13, 13	11, 12	11, 12	14, 18	6, 9.3	X, X	11, 12	12, 13
2	0.94(34/36)	HTB-96	U-2 OS	11, 11	13, 13	11, 12	11, 12	14, 18	6, 9.3	X, X	11, 12	13, 13
3	0.67(24/36)	326	SW-948	11, 11	10, 11	9, 11	11, 12	16, 18	6, 9.3	X, X	8, 11	12, 12
4	0.67(24/36)	CCL-237	SW948 [SW-948]	11, 11	10, 11	9, 11	11, 12	16, 18	6, 9.3	X, X	8, 11	12, 12
5	0.67(24/36)	CRL-5975	UMC-11	11, 11	8, 13	9, 11	11, 12	14, 15	6, 9.3	X, Y	9, 11	12, 12
6	0.67(24/36)	CRL-7242	Hs 329.T	11, 13	9, 11	11, 12	11, 12	17, 18	6, 9.3	X, X	8, 11	11, 12
7	0.67(24/36)	JCRB1020	RERF-LC-Ad1	12, 12	13, 13	11, 12	9, 12	14, 17	6, 9	X, X	8, 11	12, 13
8	0.67(24/36)	RCB2107	TN-1	10, 11	8, 13	11, 12	11, 12	14, 19	6, 6	X, X	8, 11	11, 12
9	0.67(24/36)	RCB2260	HE41	11, 11	8, 11	11, 11	9, 12	14, 18	6, 7	X, X	8, 11	12, 13
10	0.65(24/37)	RCB1021	T3M-4	11, 11	10, 13	12, 12	11, 12	18, 19, 21	9.3, 9.3	X, X	11, 12	10, 10
11	0.65(24/37)	RCB1426	PMF-ko14	11, 11	13, 14, 15	8, 8	11, 12	17, 18	9.3, 9.3	X, X	11, 12	10, 12
12	0.63(24/38)	665	UPCI-SCC-099	11, 12	8, 13	7, 9, 10	11, 12	14, 18, 19	6, 9.3	X, X	11, 11	11, 12
13	0.61(22/36)	182	COLO-680N	11, 11	13, 13	10, 12	11, 12	17, 18	8, 8	X, X	6, 8	11, 12
14	0.61(22/36)	185	LCL-HO	11, 11	13, 13	8, 12	13, 13	14, 18	7, 9.3	X, X	9, 11	9, 11

15	0.61(22/36)	255	CADO-ES1	11, 12	10, 13	11, 13	9, 11	14, 18	6, 9	X, X	8, 11	11, 12
16	0.61(22/36)	294	SW-403	11, 11	13, 13	8, 9	10, 12	14, 18	6, 6	X, X	8, 9	10, 13
17	0.61(22/36)	557	ROS-50	11, 11	8, 13	10, 11	8, 12	17, 18	6, 9.3	X, Y	11, 11	11, 12
18	0.61(22/36)	721	NCEB-1	9, 11	12, 12	10, 11	9, 10	14, 18	6, 9.3	X, X	11, 11	12, 13
19	0.61(22/36)	CCL-230	SW403 [SW-403]	11, 11	13, 13	8, 9	10, 12	14, 18	6, 6	X, X	8, 9	10, 13
20	0.61(22/36)	CRL-1635	Hs68	8, 11	11, 13	11, 12	11, 12	16, 16	6, 9.3	X, Y	11, 11	9, 12
21	0.61(22/36)	CRL-2555	Panc 04.03	11, 11	11, 12	8, 12	11, 12	14, 16	9.3, 9.3	X, X	10, 11	12, 12
22	0.61(22/36)	CRL-3005	NCEB-1	9, 11	12, 12	10, 11	9, 10	14, 18	6, 9.3	X, X	11, 11	12, 13
23	0.61(22/36)	CRL-7193	Hs 228.T	11, 12	8, 9	10, 11	11, 12	14, 18	8, 9.3	X, X	8, 11	11, 12
24	0.61(22/36)	HTB-107	SW579 [SW 579, SW-579]	11, 11	13, 13	8, 9	11, 11	14, 18	8, 9.3	X, X	8, 10	13, 13
25	0.61(22/36)	IFO50350	Hs68	8, 11	11, 13	11, 12	11, 12	16, 16	6, 9.3	X, Y	11, 11	9, 12
26	0.61(22/36)	IFO50436	KS-1	8, 12	11, 13	11, 11	11, 12	14, 18	6, 9	X, X	8, 11	10, 12
27	0.61(22/36)	RCB0210	HF19	11, 12	9, 13	11, 12	13, 14	14, 18	6, 7	X, X	8, 11	10, 13
28	0.61(22/36)	RCB2352	633	11, 11	11, 11	8, 11	11, 12	14, 14	8, 9.3	X, X	8, 11	10, 12
29	0.59(22/37)	JCRB0183	QGP-1	12, 12	13, 13	12, 12	10, 12	14, 17, 18	6, 9	X, X	8, 11	10, 12
30	0.56(20/36)	41	LP-1	11, 11	12, 12	11, 12	11, 12	17, 17	7, 8	X, X	11, 11	11, 12