Data Supplement

Thioredoxin 1 promotes autophagy through transnitrosylation of Atg7 during myocardial ischemia

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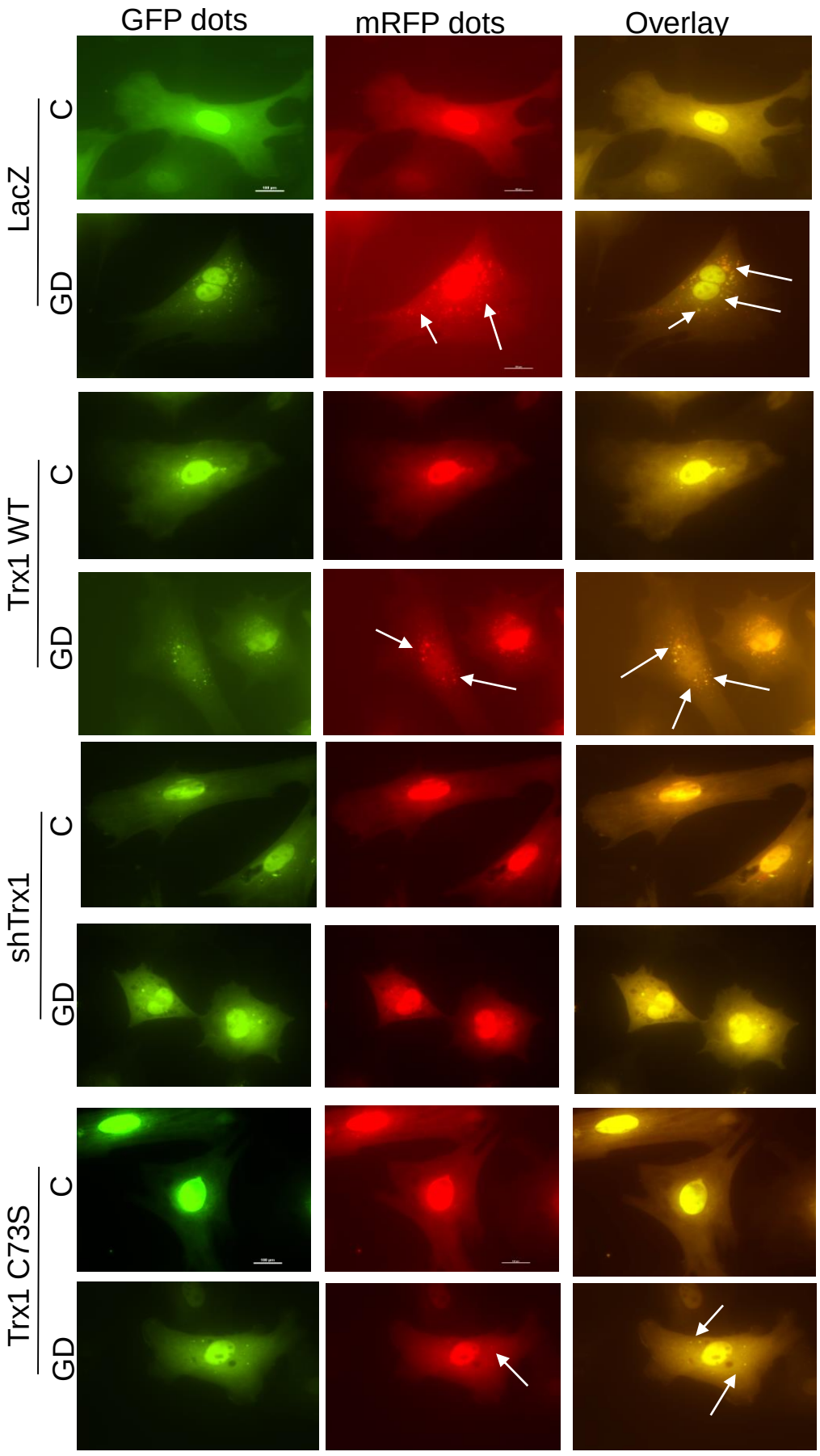
Running title: **Trx1 transnitrosylates Atg7**

A


GFP dots
mRFP dots
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LacZ
C
GD
Trx1 WT
C
GD
shTrx1
C
GD
Trx1 C73S
C
GD

B

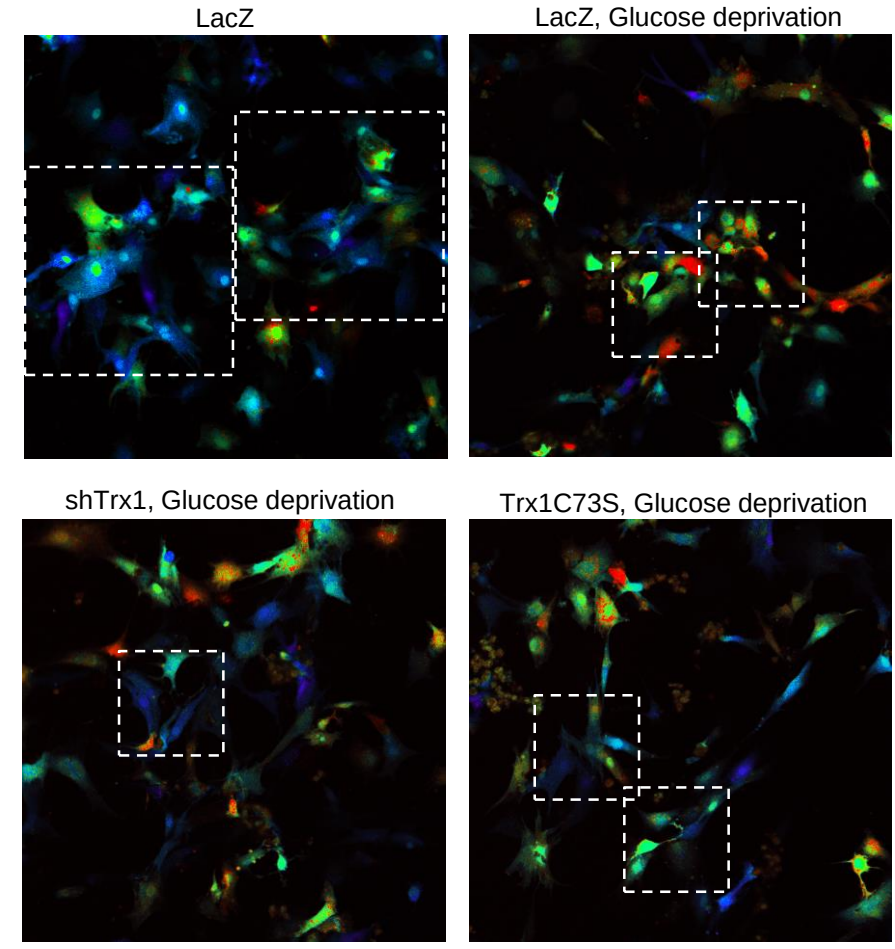

LacZ
LacZ, Glucose deprivation
shTrx1, Glucose deprivation
Trx1C73S, Glucose deprivation

Figure S1. (A) Representative microscopic images of GFP and mRFP dots shown in Figure 2A. (B) Low powered images corresponding to Figure 2B.

Table S1

Group	*n*	LVEDD	LVESD	IVSWT	PWT	EF (%)	%FS
Wild	**8**	4.19±0.28	3.07±0.38	0.73±0.06	0.87±0.12	52.49±9.86	26.95±6.06
Wild Starvation	**8**	3.94±0.59	2.93±0.63	0.71±0.09	0.69±0.11	51.83±9.37	26.35±5.78
C73S	**8**	4.14±0.22	3.11±0.32	0.65±0.05	0.61±0.09	49.35±9.2	24.39±5.63
C73S Starvation	**8**	3.8±0.71	2.82±0.43	0.69±0.16	0.67±0.24	49.25±11.8	24.89±7.38

Value are means ± SD. n, number; LVEDD, left ventricular end diastolic dimension, mm; LVESD, left ventricular end systolic dimension, mm; IVSWT, interventricular septal wall thickness, mm; PWT, posterior wall thickness, mm; EF, left ventricular ejection fraction, %; FS, fractional shortening, %. Statistical significance was determined with ANOVA. There is no statistical significance between Wild and Trx1C73S knock-in mice.

Table S2

Group	*n*	LVEDD	LVESD	IVSWT	PWT	EF (%)	%FS
Wild	**5**	4.46±0.27	3.22±0.24	0.56±0.07	0.51±0.07	54.30±2.31	27.97±1.41
Wild MI	**5**	4.76±0.50	3.96±0.67	0.43±0.05	0.45±0.09	35.93±10.54	17.38±5.59
C73S	**6**	4.45±0.29	3.4±0.32	0.63±0.09	0.54±0.05	47.33±4.89	23.65±2.86
C73S MI	**5**	4.72±0.26	4.23±0.25	0.53±0.05	0.41±0.05	22.59±5.71*	10.37±2.84*

Value are means ± SD. n, number; LVEDD, left ventricular end diastolic dimension, mm; LVESD, left ventricular end systolic dimension, mm; IVSWT, interventricular septal wall thickness, mm; PWT, posterior wall thickness, mm; EF, left ventricular ejection fraction, %; FS, fractional shortening, %. Statistical significance was determined with ANOVA. * $p<0.05$; vs Wild MI.

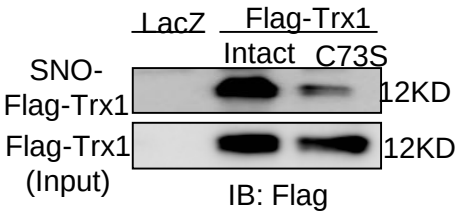
Table S3

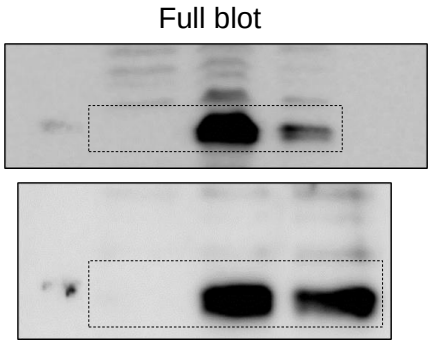
Group	*n*	LVEDD	LVESD	IVSWT	PWT	EF (%)	%FS
Wild	**6**	4.58±0.35	3.33±0.33	0.61±0.07	0.52±0.09	53.27±3.35	27.38±2.03
Wild MI	**6**	4.65±0.34	3.87±0.49	0.51±0.09	0.47±0.05	35.17±10.09	16.94±5.33
C402S	**7**	4.37±0.40	3.32±0.35	0.58±0.08	0.49±0.05	48.21±4.86	24.15±2.84
C402S MI	**6**	4.31±0.44	3.82±0.37	0.47±0.08	0.41±0.10	24.47±5.21*	11.20±2.62*

Value are means ± SD. n, number; LVEDD, left ventricular end diastolic dimension, mm; LVESD, left ventricular end systolic dimension, mm; IVSWT, interventricular septal wall thickness, mm; PWT, posterior wall thickness, mm; EF, left ventricular ejection fraction, %; FS, fractional shortening, %. Statistical significance was determined with ANOVA. * $p<0.05$; vs Wild MI.

UNCUT GELS

Figure 1B





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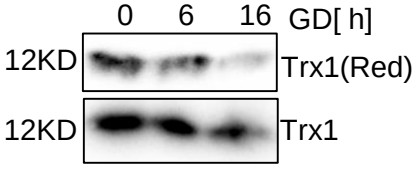

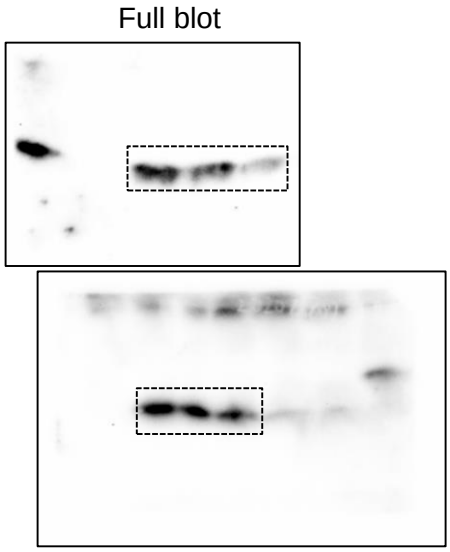

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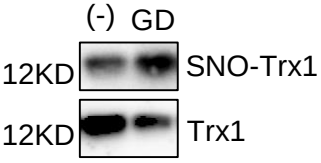

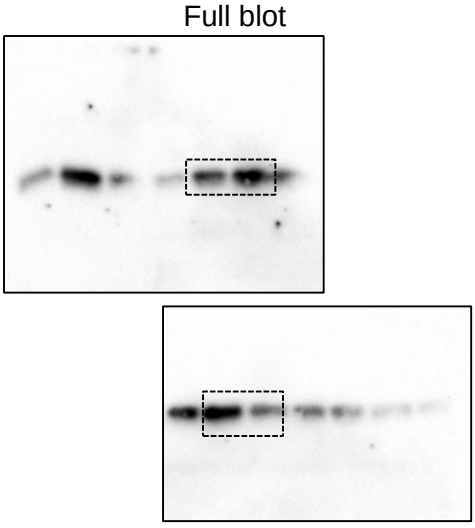

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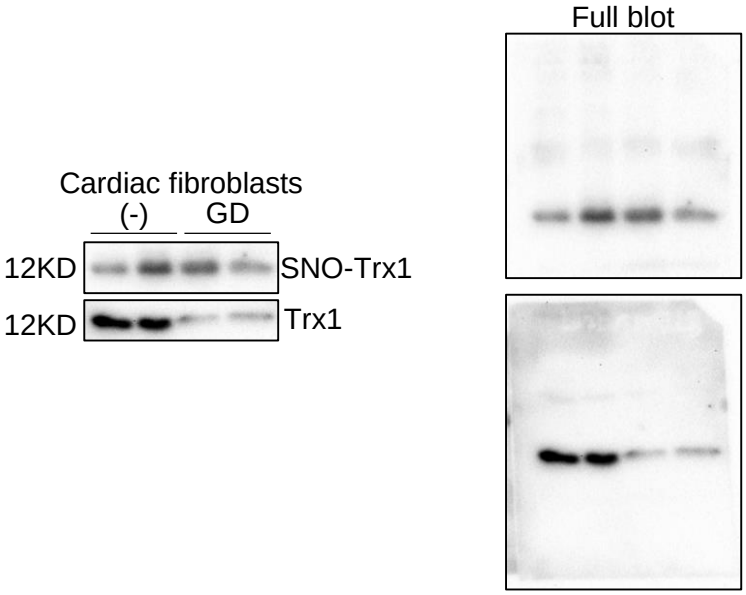

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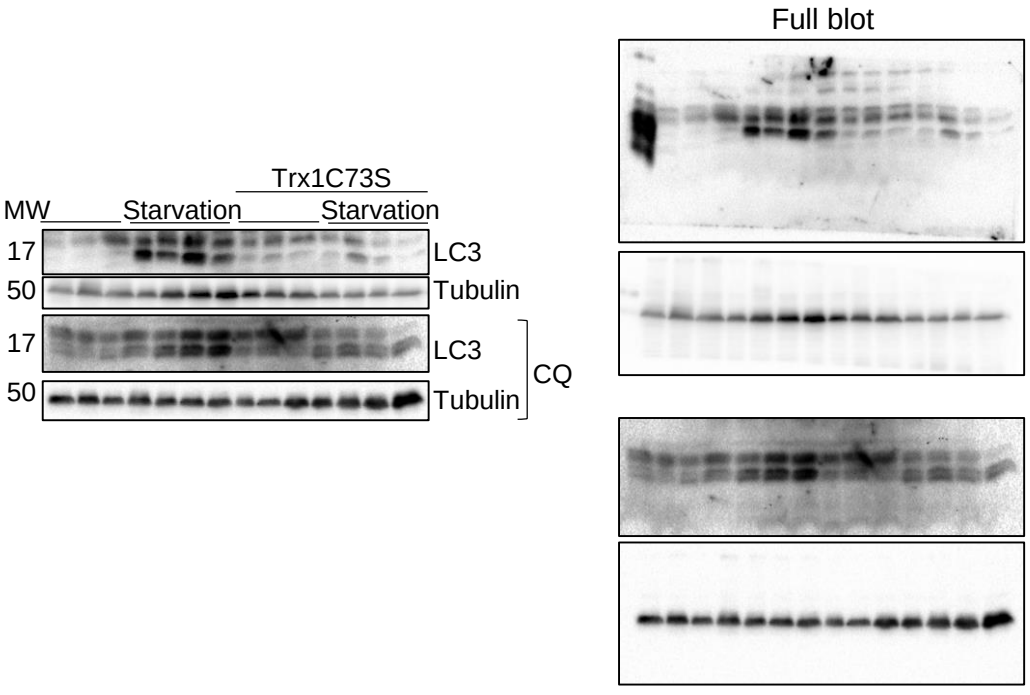

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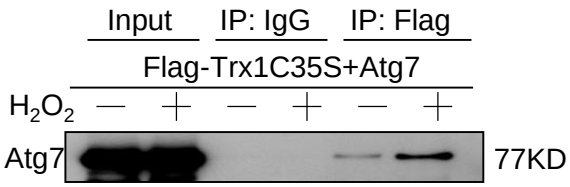

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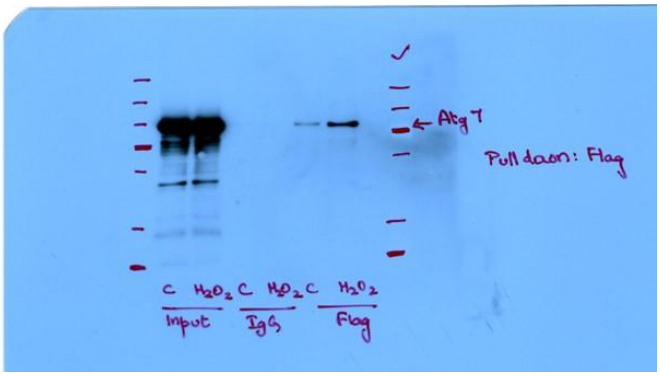

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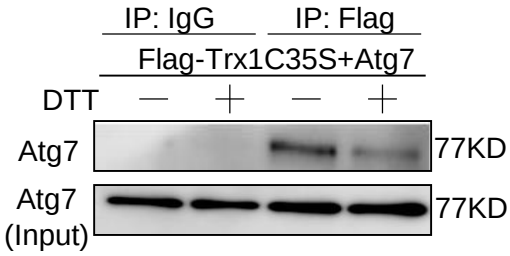

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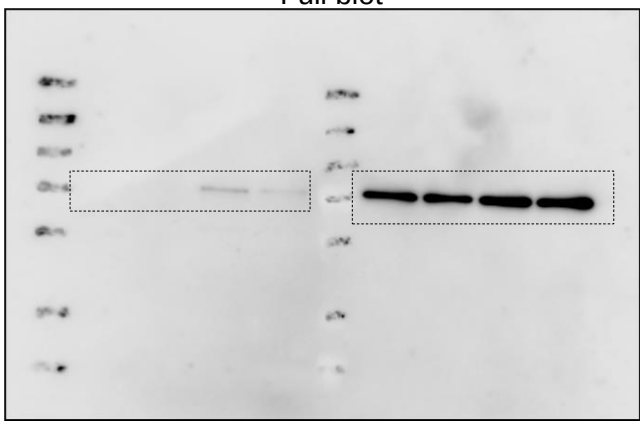

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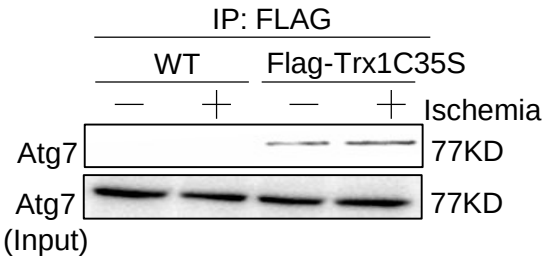

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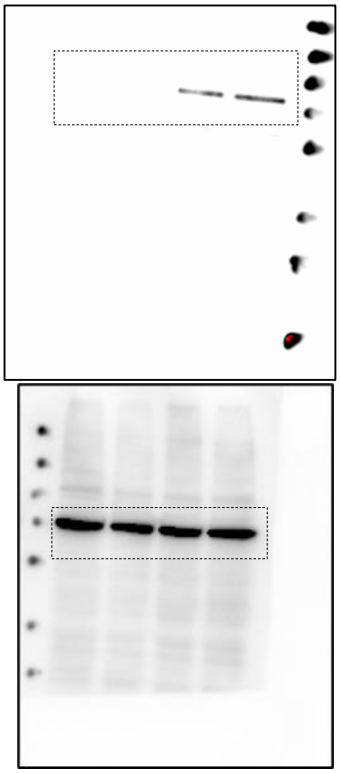

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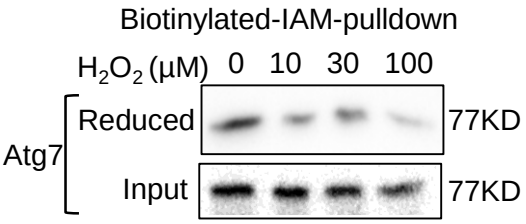

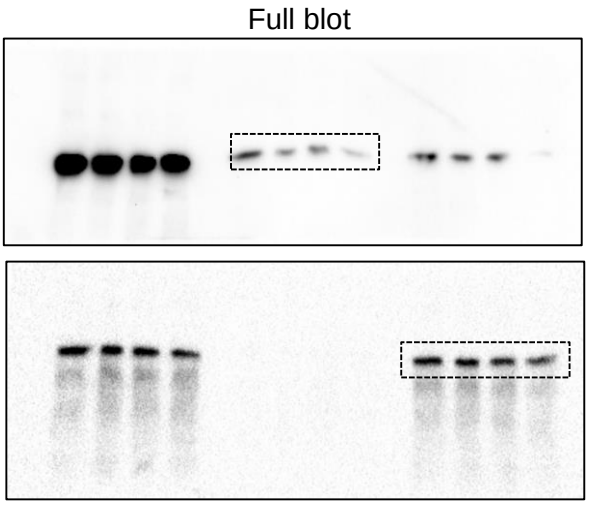

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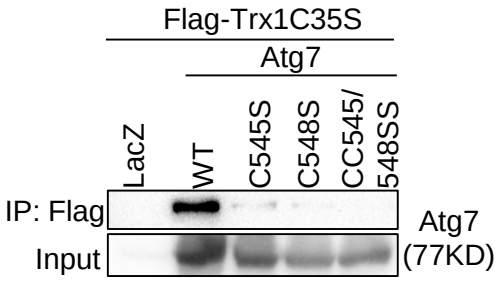

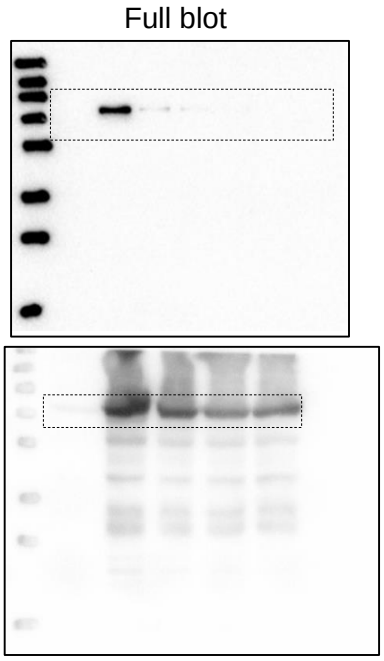

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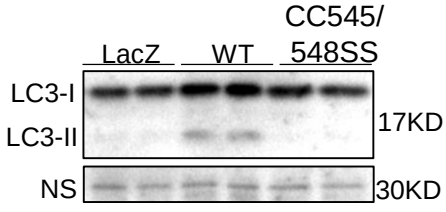

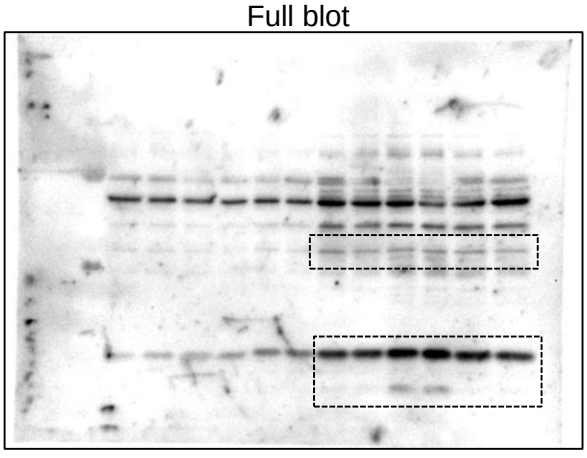

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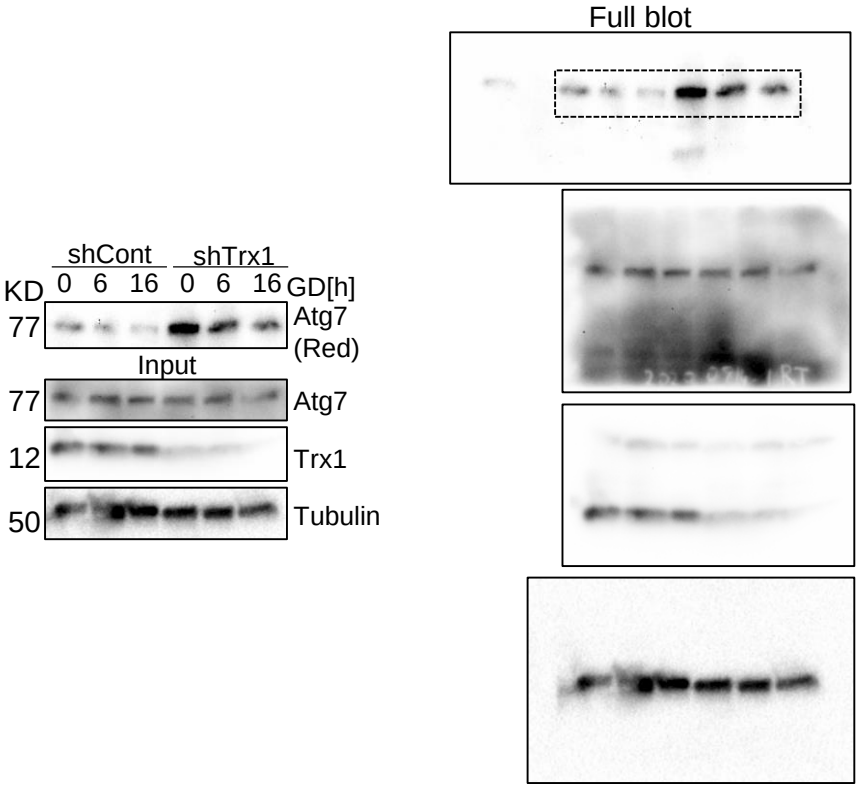

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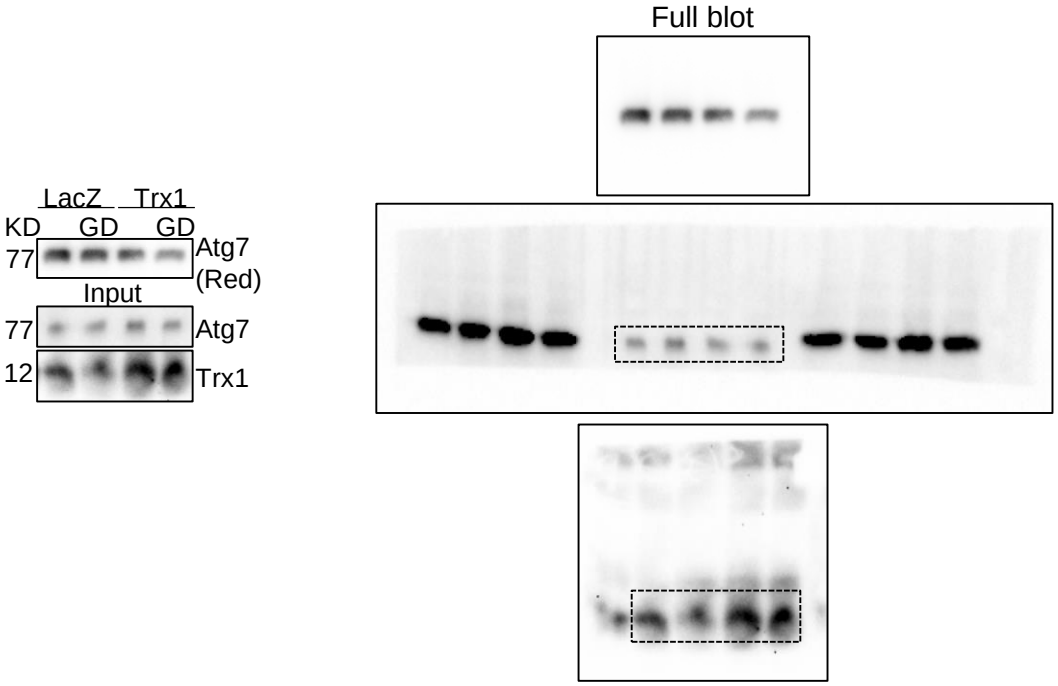

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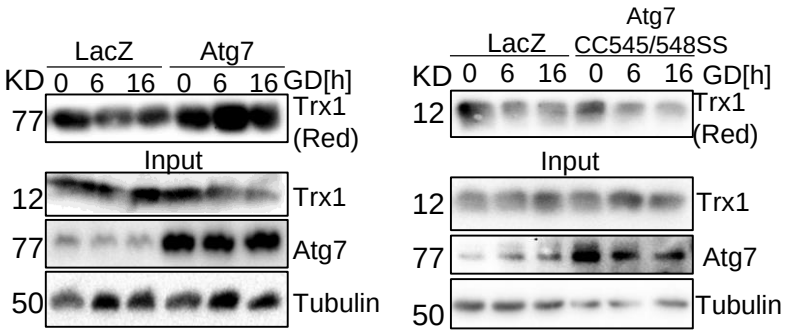

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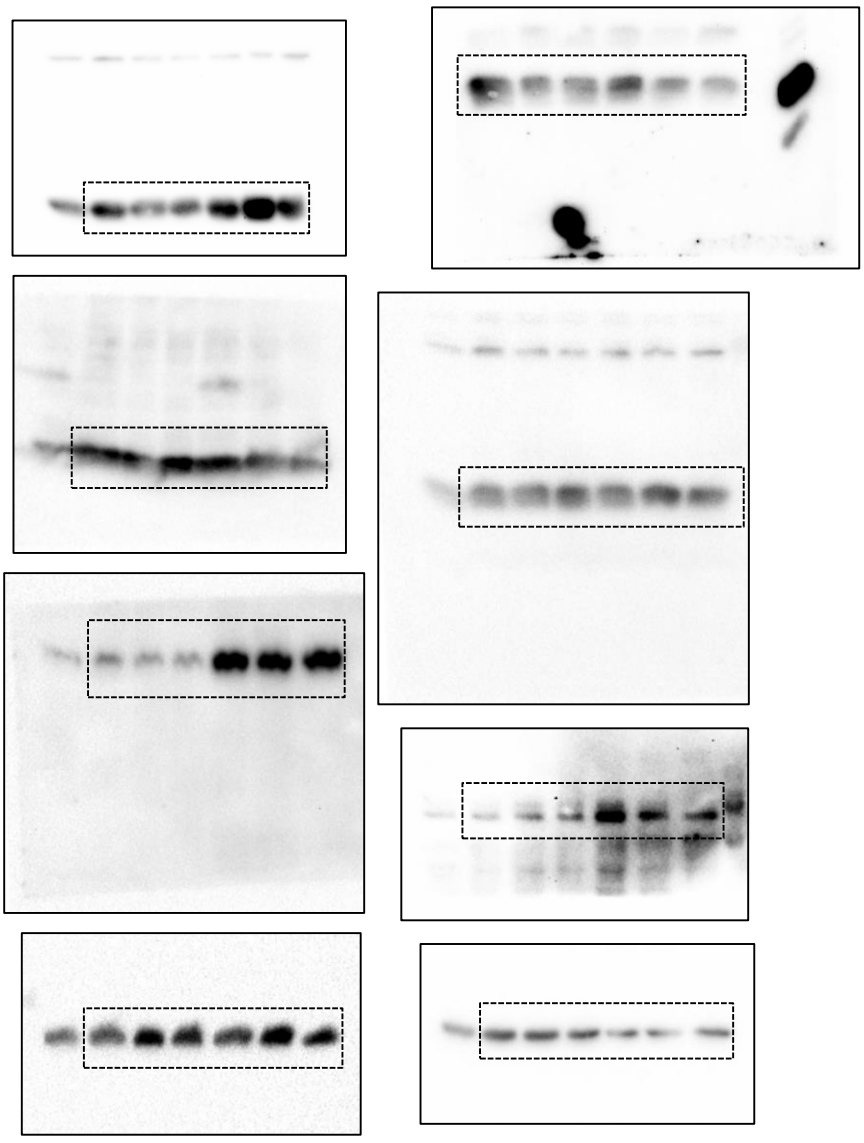

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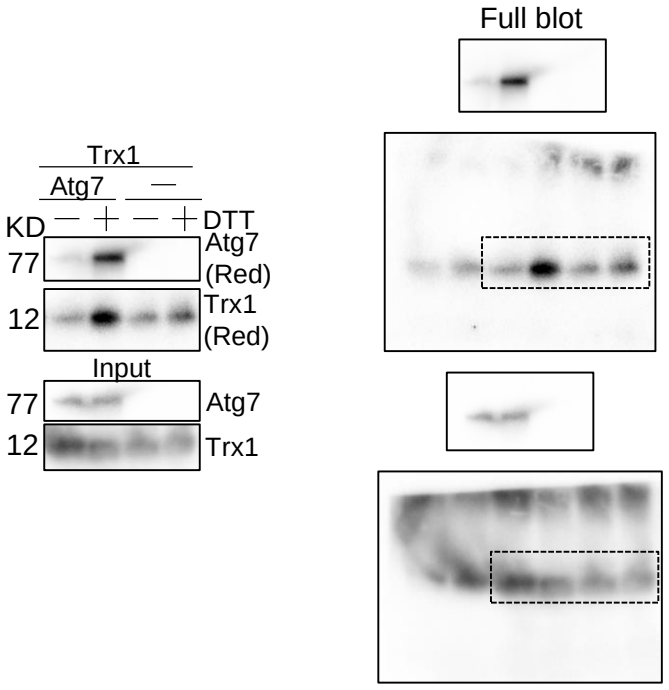

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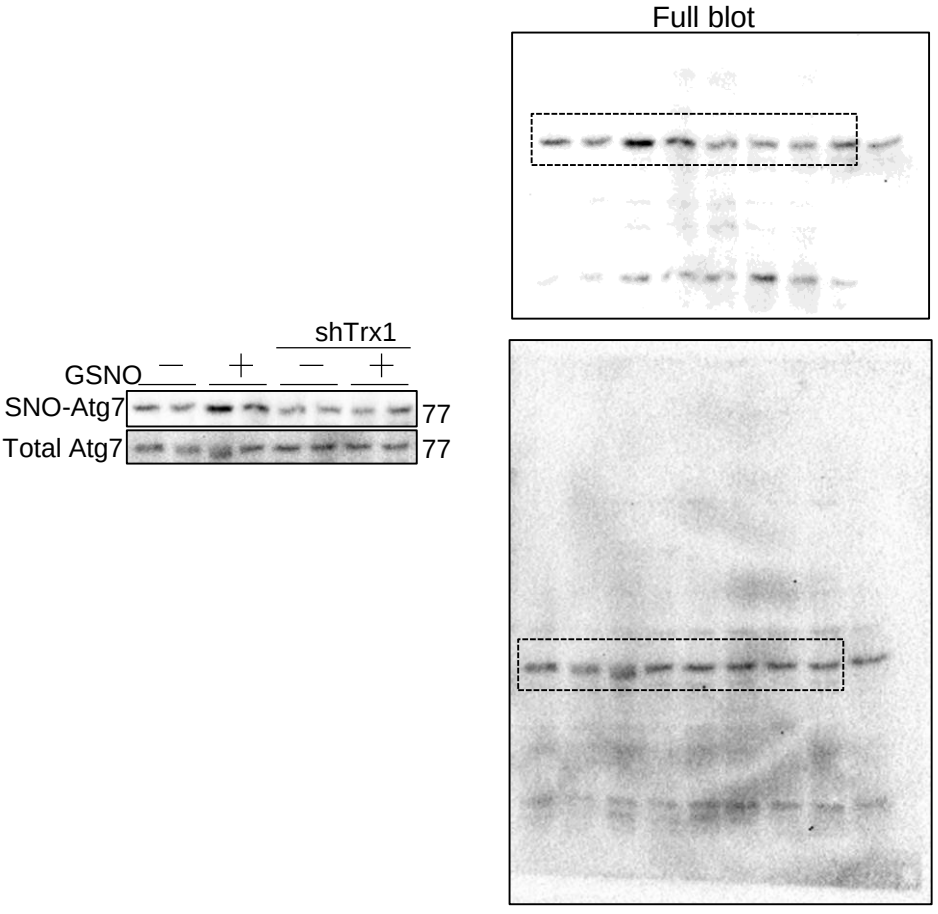

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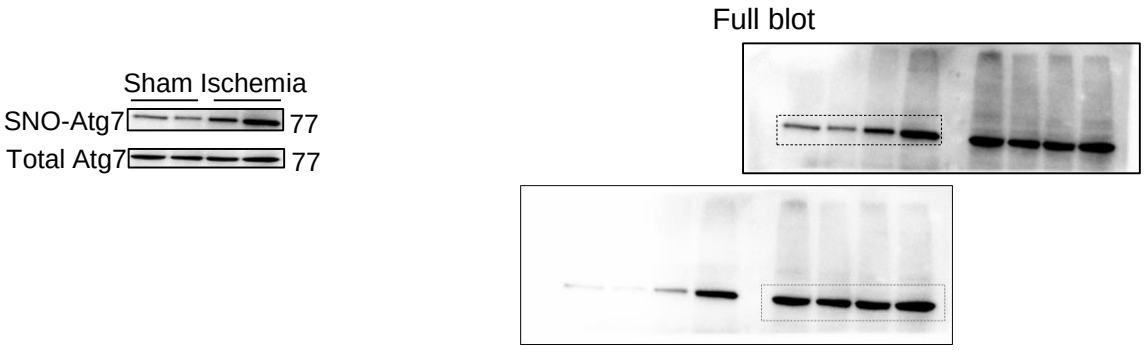

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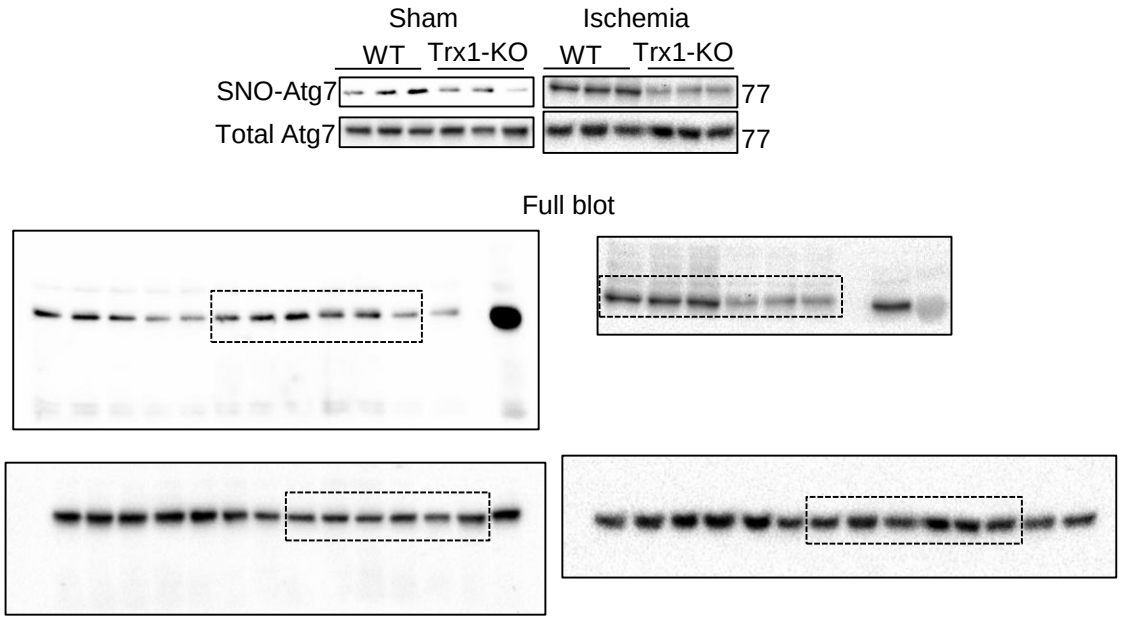

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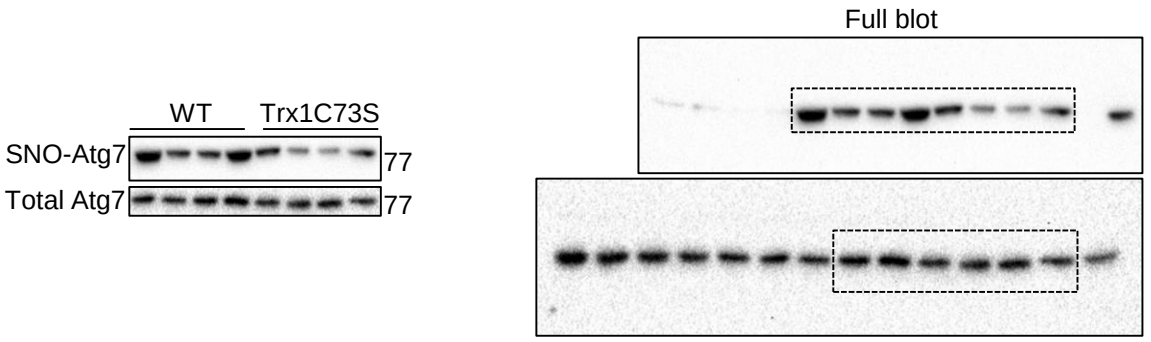

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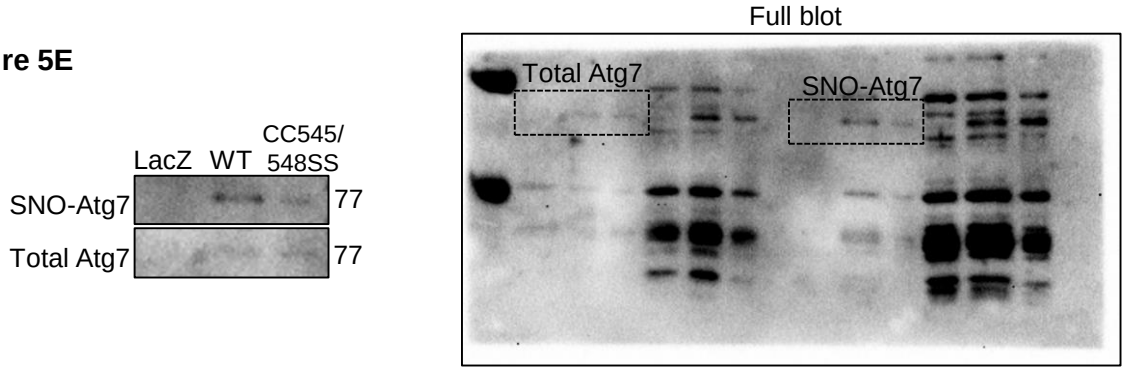

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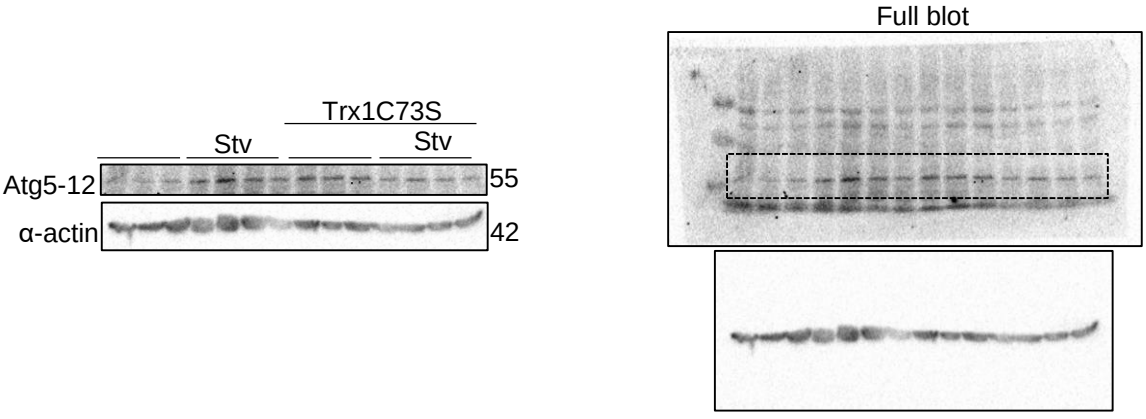

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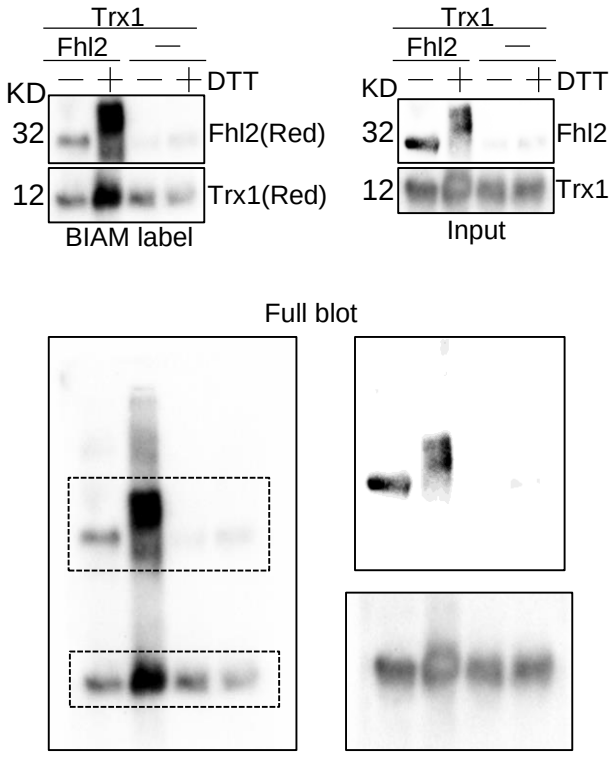
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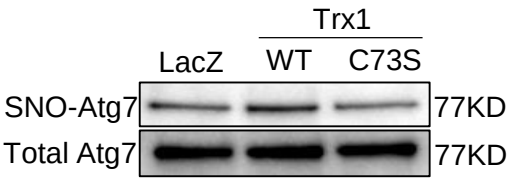
Input
Full blot

Figure 6C



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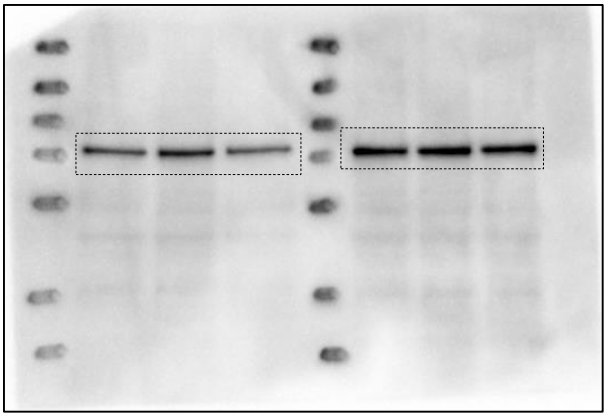
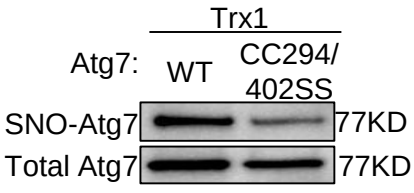


Figure 6D



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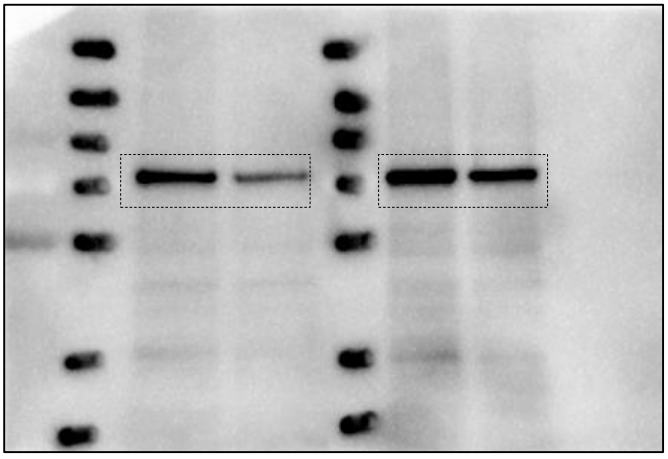

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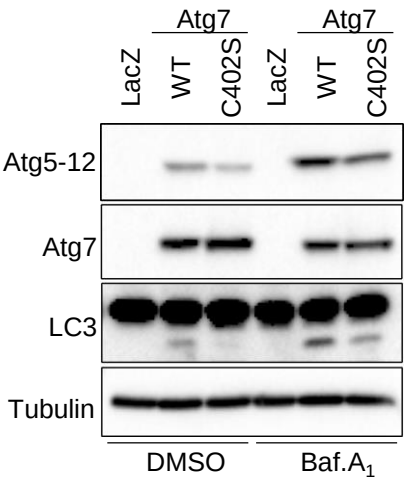
Atg7
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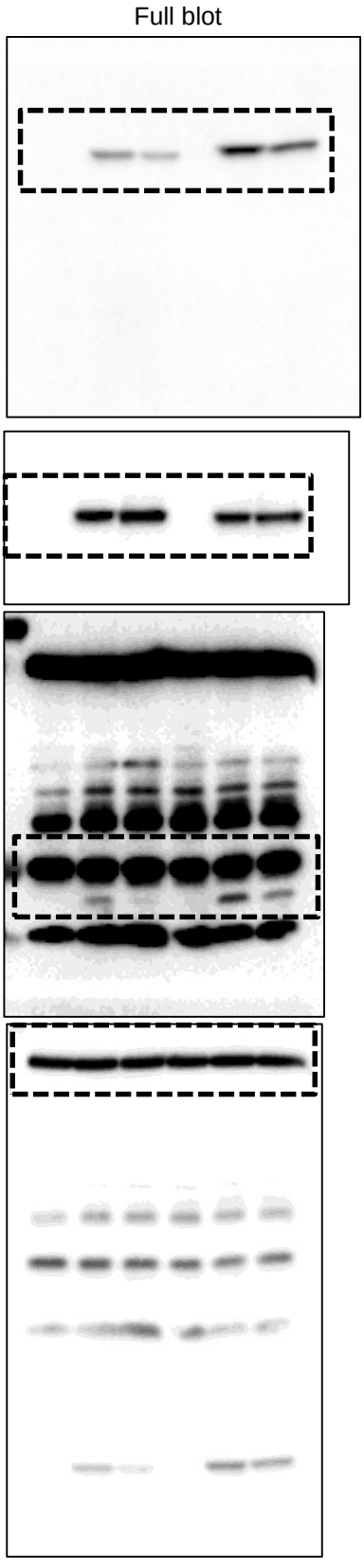
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