

Supporting Information

Kurihara *et al.* 10.1073/pnas.0808902106

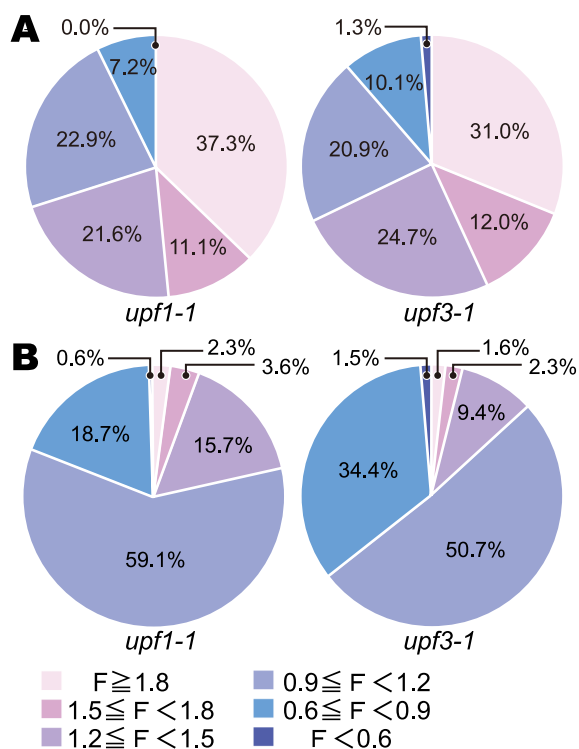


Fig. S1. Classification of the AGI-annotated transcripts based on fold changes. (A) Classification of the expressed miRNAs with AGI codes (P initial $\leq 10^{-8}$) into 6 groups based on the fold changes. (B) Classification of the expressed AGI-annotated protein-coding transcripts (P initial $\leq 10^{-8}$) into 6 groups based on the fold changes.

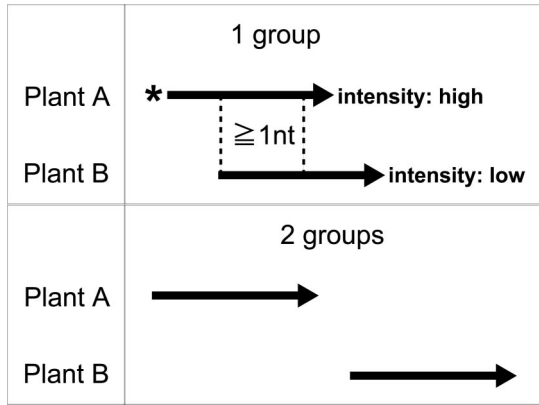


Fig. S2. Illustration of the grouping of non-AGI TUs among Plant A and Plant B. Arrows indicate respective TUs. The non-AGI TUs overlapping each other by more than one base were classified into the same group. If the intensity of TU is higher in Plant A than in Plant B, the TU in Plant A is the group-representative TU as indicated by the asterisk. The non-AGI TUs that did not overlap were classified into two distinct groups.

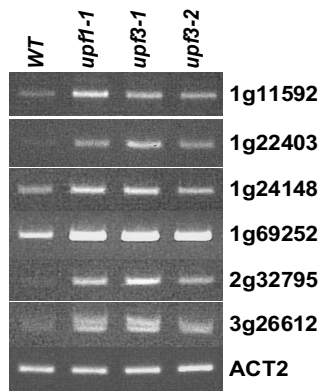


Fig. S3. Quantitative RT-PCR analysis of mlncRNAs in *upf3-2* mutants.

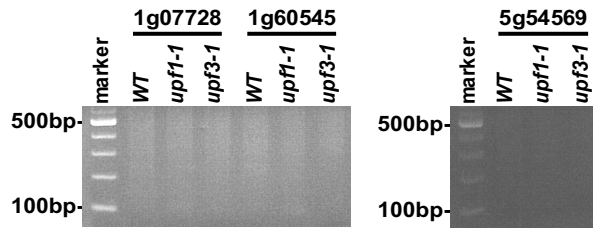


Fig. S4. Modified 5'RACE-based RT-PCR analysis to examine whether uncapped transcripts were targeted by NMD. We directly ligated the 5' adapter RNA oligo to the sample RNAs followed by quantitative RT-PCR.

Table S1. AGI-annotated transcripts up-regulated >1.8-fold in *upf1-1*

Category [†]	AGI code [‡]	Fold change [§]		nat-RNA	Other mlncRNA	Overlap ^{††}	Sense gene ^{††}
		<i>Upf1-1</i>	<i>Upf3-1</i>				
Protein-coding	AT1G01060.1	2.57	2.19			*	
Protein-coding	AT1G01860.1	1.93	2.92			*	
Protein-coding	AT1G02010.1	2.37	1.66				
Protein-coding	AT1G05680.1	2.05	1.23				
Protein-coding	AT1G06150.1	2.30	2.92			*	
Protein-coding	AT1G06550.1	2.71	2.30				
Protein-coding	AT1G07010.1	3.31	3.55			*	
Protein-coding	AT1G07640.1	2.01	1.90			*	
Protein-coding	AT1G12750.1	2.68	2.76			*	
Protein-coding	AT1G14560.1	1.82	1.61				
Protein-coding	AT1G15165.1	3.88	3.27			*	
Protein-coding	AT1G18030.1	2.13	1.85				
Protein-coding	AT1G18570.1	2.34	1.56				
Protein-coding	AT1G21160.1	1.86	1.57				
Protein-coding	AT1G27760.1	2.43	1.74				
Protein-coding	AT1G29950.1	3.63	3.02			*	
Protein-coding	AT1G31910.1	1.91	1.67				
Protein-coding	AT1G32940.1	2.81	2.44			*	
Protein-coding	AT1G34270.1	1.88	2.11			*	
Protein-coding	AT1G36730.1	3.33	4.14			*	
Protein-coding	AT1G45160.1	1.80	1.75				
Protein-coding	AT1G49350.1	2.10	1.48				
Protein-coding	AT1G49790.1	1.91	1.81				
Protein-coding	AT1G50180.1	2.13	1.69				
Protein-coding	AT1G50300.1	1.88	1.64				
Protein-coding	AT1G50440.1	2.06	2.11			*	
Protein-coding	AT1G51370.1	2.43	2.62			*	
Protein-coding	AT1G55910.1	2.48	2.61			*	
Protein-coding	AT1G56350.1	1.90	1.31				
Protein-coding	AT1G58160.1	4.63	7.04			*	
Protein-coding	AT1G59620.1	3.20	2.86			*	
Protein-coding	AT1G63230.1	2.36	1.85				
Protein-coding	AT1G64140.1	1.92	2.08			*	
Protein-coding	AT1G64570.1	2.39	1.73				
Protein-coding	AT1G65840.1	2.74	2.18			*	
Protein-coding	AT1G66540.1	2.98	1.96			*	
Protein-coding	AT1G68890.1	2.34	1.32				
Protein-coding	AT1G70505.1	2.49	1.88				
Protein-coding	AT1G70790.1	3.15	3.21			*	
Protein-coding	AT1G71696.1	2.22	1.41				
Protein-coding	AT1G71810.1	2.33	2.09			*	
Protein-coding	AT1G72050.1	4.09	2.04				
Protein-coding	AT1G73170.1	1.85	1.62				
Protein-coding	AT1G73750.1	2.18	1.86				
Protein-coding	AT1G74170.1	2.07	2.00			*	
Protein-coding	AT1G74370.1	1.88	1.83				
Protein-coding	AT1G77840.1	1.88	1.37				
Protein-coding	AT1G78450.1	3.14	3.30			*	
Protein-coding	AT1G78690.1	2.19	2.05				
Protein-coding	AT1G78960.1	3.28	2.57			*	
Protein-coding	AT2G01100.1	1.94	1.88				
Protein-coding	AT2G01330.1	3.34	3.39			*	
Protein-coding	AT2G01390.1	1.87	1.59				
Protein-coding	AT2G04430.1	3.61	2.80			*	
Protein-coding	AT2G04450.1	2.94	2.47			*	
Protein-coding	AT2G06005.1	2.70	1.84				
Protein-coding	AT2G13790.1	1.83	1.59				
Protein-coding	AT2G14610.1	2.85	1.28				
Protein-coding	AT2G18560.1	2.37	2.93			*	
Protein-coding	AT2G18680.1	2.75	1.70				
Protein-coding	AT2G20830.1	1.86	1.59				
Protein-coding	AT2G21370.1	2.06	1.71				
Protein-coding	AT2G24520.1	1.83	1.62				

Category [†]	AGI code [‡]	Fold change [§]		nat-RNA [¶]	Other miRNA	Overlap ^{††}	Sense gene ^{‡‡}
		<i>Upf1-1</i>	<i>Upf3-1</i>				
Protein-coding	AT2G28605.1	2.43	1.91				
Protein-coding	AT2G32295.1	2.31	1.61				
Protein-coding	AT2G37630.1	3.05	2.57			*	
Protein-coding	AT2G38185.1	2.36	1.69				
Protein-coding	AT2G38330.1	2.47	2.28			*	
Protein-coding	AT2G41000.1	3.22	2.17				
Protein-coding	AT2G41080.1	1.81	1.55				
Protein-coding	AT2G41240.1	3.98	1.01				
Protein-coding	AT2G42955.1	2.73	2.49				
Protein-coding	AT2G44850.1	2.30	2.14			*	
Protein-coding	AT2G45880.1	2.02	1.07				
Protein-coding	AT2G46320.1	2.73	2.14				
Protein-coding	AT2G47160.1	1.94	1.62				
Protein-coding	AT2G47490.1	3.30	2.50			*	
Protein-coding	AT2G48000.1	1.89	2.03			*	
Protein-coding	AT3G02830.1	2.11	1.85				
Protein-coding	AT3G03360.1	3.30	2.74			*	
Protein-coding	AT3G06210.1	2.56	2.56			*	
Protein-coding	AT3G08730.1	3.08	3.00			*	
Protein-coding	AT3G09600.1	2.40	2.03				
Protein-coding	AT3G13190.1	2.57	1.20				
Protein-coding	AT3G15354.1	2.82	1.71				
Protein-coding	AT3G17830.1	2.15	1.43				
Protein-coding	AT3G18000.1	5.90	4.78			*	
Protein-coding	AT3G18500.1	2.33	1.95			*	
Protein-coding	AT3G20080.1	2.71	1.91			*	
Protein-coding	AT3G20120.1	2.02	2.13			*	
Protein-coding	AT3G21390.1	3.48	3.29			*	
Protein-coding	AT3G23790.1	1.97	1.80				
Protein-coding	AT3G24070.1	2.84	2.76			*	
Protein-coding	AT3G25430.1	1.82	1.27				
Protein-coding	AT3G26540.1	2.09	1.82			*	
Protein-coding	AT3G26730.1	2.01	1.70				
Protein-coding	AT3G26950.1	1.83	1.85			*	
Protein-coding	AT3G27940.1	4.28	1.96				
Protein-coding	AT3G29410.1	2.48	1.38				
Protein-coding	AT3G33530.1	1.86	1.67				
Protein-coding	AT3G45443.1	2.69	3.48			*	
Protein-coding	AT3G47390.1	2.42	1.53				
Protein-coding	AT3G51110.1	1.81	1.53				
Protein-coding	AT3G51630.1	2.04	1.66				
Protein-coding	AT3G53240.1	5.18	4.61			*	
Protein-coding	AT3G53400.1	5.24	4.58			*	
Protein-coding	AT3G53830.1	1.89	1.47				
Protein-coding	AT3G54910.1	1.80	1.77				
Protein-coding	AT3G56080.1	2.13	1.51				
Protein-coding	AT3G56300.1	3.08	2.25			*	
Protein-coding	AT3G56330.1	2.27	1.41				
Protein-coding	AT3G56840.1	2.02	2.46			*	
Protein-coding	AT3G56970.1	2.45	0.97				
Protein-coding	AT3G56980.1	2.51	0.89				
Protein-coding	AT3G58940.1	1.91	2.10			*	
Protein-coding	AT3G59780.1	1.91	1.48				
Protein-coding	AT3G60310.1	2.06	1.94			*	
Protein-coding	AT4G00590.1	2.71	2.49			*	
Protein-coding	AT4G00880.1	3.13	2.02				
Protein-coding	AT4G03060.1	2.95	4.70			*	
Protein-coding	AT4G03260.1	2.49	1.94			*	
Protein-coding	AT4G03635.1	2.72	1.93				
Protein-coding	AT4G05040.1	2.13	1.79				
Protein-coding	AT4G07825.1	1.95	1.95			*	
Protein-coding	AT4G09180.1	2.10	1.97				
Protein-coding	AT4G09490.1	2.30	2.33				
Protein-coding	AT4G11000.1	2.18	2.65			*	

Category [†]	AGI code [‡]	Fold change [§]		nat-RNA [¶]	Other miRNA	Overlap ^{††}	Sense gene ^{††}
		<i>Upf1-1</i>	<i>Upf3-1</i>				
Protein-coding	AT4G13810.1	2.67	2.87			*	
Protein-coding	AT4G15260.1	3.27	4.91			*	
Protein-coding	AT4G15440.1	2.20	2.15			*	
Protein-coding	AT4G18270.1	2.41	1.97			*	
Protein-coding	AT4G19110.1	3.22	2.58			*	
Protein-coding	AT4G23050.1	2.16	1.85			*	
Protein-coding	AT4G24080.1	2.86	1.94				
Protein-coding	AT4G24790.1	1.82	1.35				
Protein-coding	AT4G24810.1	2.73	2.37			*	
Protein-coding	AT4G25270.1	2.26	2.89			*	
Protein-coding	AT4G25600.1	2.62	2.71			*	
Protein-coding	AT4G26520.1	2.12	2.08			*	
Protein-coding	AT4G26555.1	1.94	2.16			*	
Protein-coding	AT4G26850.1	3.38	2.55			*	
Protein-coding	AT4G30680.1	2.30	2.76			*	
Protein-coding	AT4G30960.1	1.97	1.92			*	
Protein-coding	AT4G32270.1	2.88	2.73			*	
Protein-coding	AT4G33470.1	2.22	2.19			*	
Protein-coding	AT4G34020.1	2.17	2.30			*	
Protein-coding	AT4G34140.1	1.96	1.23				
Protein-coding	AT4G34310.1	1.85	1.42				
Protein-coding	AT4G36840.1	4.50	4.47			*	
Protein-coding	AT4G39620.1	1.92	1.95				
Protein-coding	AT5G01450.1	2.60	2.41			*	
Protein-coding	AT5G01510.1	2.11	1.14				
Protein-coding	AT5G01810.1	2.41	2.19			*	
Protein-coding	AT5G02480.1	1.89	1.77				
Protein-coding	AT5G02650.1	3.80	4.29			*	
Protein-coding	AT5G06180.1	1.82	1.40				
Protein-coding	AT5G07130.1	1.86	1.68				
Protein-coding	AT5G08030.1	2.08	1.52				
Protein-coding	AT5G08510.1	1.99	2.40			*	
Protein-coding	AT5G08710.1	2.39	2.11				
Protein-coding	AT5G09460.1	3.26	2.82			*	
Protein-coding	AT5G15950.1	6.78	2.97			*	
Protein-coding	AT5G16540.1	2.47	2.31			*	
Protein-coding	AT5G17240.1	2.09	1.44				
Protein-coding	AT5G17670.1	2.06	2.72			*	
Protein-coding	AT5G19400.1	2.52	3.88			*	
Protein-coding	AT5G20070.1	2.10	1.55				
Protein-coding	AT5G20220.1	2.55	2.11			*	
Protein-coding	AT5G20410.1	1.87	1.70				
Protein-coding	AT5G23490.1	2.01	1.38				
Protein-coding	AT5G24210.1	2.22	1.76				
Protein-coding	AT5G26270.1	1.99	1.87				
Protein-coding	AT5G27390.1	2.48	2.01				
Protein-coding	AT5G36940.1	3.73	3.92			*	
Protein-coding	AT5G37260.1	3.21	3.35			*	
Protein-coding	AT5G38590.1	1.90	2.14			*	
Protein-coding	AT5G43930.1	1.97	1.53				
Protein-coding	AT5G44600.1	2.35	1.99				
Protein-coding	AT5G45430.1	7.30	6.32			*	
Protein-coding	AT5G45650.1	2.01	1.28				
Protein-coding	AT5G47790.1	2.21	2.29			*	
Protein-coding	AT5G47880.1	5.13	2.58			*	
Protein-coding	AT5G48110.1	1.89	1.25				
Protein-coding	AT5G48330.1	2.55	1.92				
Protein-coding	AT5G48440.1	2.08	2.11			*	
Protein-coding	AT5G49500.1	2.72	2.10				
Protein-coding	AT5G50180.1	2.14	1.55				
Protein-coding	AT5G51050.1	1.93	1.48				
Protein-coding	AT5G51540.1	2.15	1.25				
Protein-coding	AT5G52550.1	1.92	2.14			*	
Protein-coding	AT5G53450.1	2.70	1.70				

Category [†]	AGI code [‡]	Fold change [§]		nat-RNA [¶]	Other mlncRNA	Overlap ^{**}	Sense gene ^{**}
		<i>Upf1-1</i>	<i>Upf3-1</i>				
Protein-coding	AT5G53900.1	2.27	2.20			*	
Protein-coding	AT5G56990.1	2.86	4.58			*	
Protein-coding	AT5G59780.1	2.22	1.77				
Protein-coding	AT5G64340.1	2.39	2.71			*	
Protein-coding	AT5G65450.1	2.40	2.00			*	
Protein-coding	AT5G66005.1	2.80	3.04			*	
Protein-coding	AT5G67610.1	1.82	1.50				
mlncRNA	AT1G01448.1	1.87	1.88	*		*	AT1G01450
mlncRNA	AT1G07728.1	2.25	2.58	*		*	AT1G07725
mlncRNA	AT1G17255.1	1.80	1.30	*			AT1G17250
mlncRNA	AT1G33415.1	3.60	3.14	*		*	AT1G33420, AT1G33430
mlncRNA	AT1G34844.1	2.96	3.20	*		*	AT1G34842
mlncRNA	AT1G48315.1	3.22	3.62	*		*	AT1G48320
mlncRNA	AT1G51645.1	2.28	1.91	*		*	AT1G51640
mlncRNA	AT1G60505.1	2.16	2.26	*		*	AT1G60510
mlncRNA	AT1G60525.1	3.17	2.80	*			AT1G60530
mlncRNA	AT1G60545.1	2.63	1.98	*		*	AT1G60540
mlncRNA	AT1G67792.1	3.25	2.82	*		*	AT1G67790
mlncRNA	AT1G69252.1	3.63	4.04		**	*	
mlncRNA	AT1G72855.1	2.77	3.40	*		*	AT1G72860
mlncRNA	AT1G78265.1	1.91	2.04	*			AT1G78270
mlncRNA	AT2G06002.1	5.93	2.03		**		
mlncRNA	AT2G24755.1	2.66	3.31	*			AT2G24750, AT2G24760
mlncRNA	AT2G32795.1	4.65	4.23		**		
mlncRNA	AT2G35738.1	2.14	2.30	*			AT2G35740
mlncRNA	AT2G36792.1	3.03	2.51	*		*	AT2G36790
mlncRNA	AT2G42247.1	2.08	1.48	*			AT2G42250
mlncRNA	AT3G01142.1	2.33	1.48	*			AT3G01140
mlncRNA	AT3G04485.1	3.09	2.34		**		
mlncRNA	AT3G26612.1	4.27	3.98		**	*	
mlncRNA	AT3G27990.1	3.41	2.71		**	*	
mlncRNA	AT3G56408.1	3.26	3.72	*		*	AT3G56410
mlncRNA	AT3G63445.1	3.04	3.55	*		*	AT3G63440
mlncRNA	AT4G04221.1	1.99	1.43	*			AT4G04220
mlncRNA	AT4G26795.1	2.17	1.57	*			AT4G26790
mlncRNA	AT4G37432.1	4.11	4.60	*		*	AT4G37430
mlncRNA	AT5G53048.1	4.60	2.71	*		*	AT5G53050
mlncRNA	AT5G54569.1	3.01	3.65	*		*	AT5G54570
transposon	AT2G10410.1	1.92	1.76				
transposon	AT2G13970.1	3.92	3.29			*	
transposon	AT3G42658.1	3.72	1.46				
transposon	AT4G04293.1	3.25	3.97			*	
transposon	AT4G28900.1	2.18	1.79				
transposon	AT5G28626.1	3.28	2.61			*	
transposon	AT5G35777.1	2.47	2.15				
other	AT1G66725.1	2.33	1.82				

[†]We classified the up-regulated AGI-annotated genes into 4 categories, protein-coding, mlncRNA, transposon, and other.

[‡]AGI-annotated genes. The genes marked by bold characters indicate exosome substrates reported previously (Chekanova JA, et al. (2007) Genome-wide high resolution mapping of exosome substrates reveals hidden feature in the *Arabidopsis* transcriptome. *Cell* 131:1340–1353).

[§][Signal Intensity (HLE values) of each gene in *upf1-1* or *upf3-1*] ÷ [Signal Intensity (HLE values) of each gene in wild type].

[¶]Genes for nat-RNAs are marked by asterisks.

^{||}Genes for other mlncRNA are marked by double asterisks.

^{**}Genes up-regulated in both *upf1-1* and *upf3-1* are marked by asterisks.

^{**}These represent the sense genes overlapping more than one base with nat-RNAs. The genes marked by bold characters encode transposons or pseudogenes.

Table S2. AGI-annotated transcripts up-regulated >1.8-fold in *upf3-1*

Category [†]	AGI code [‡]	Fold change [§]		nat-RNA	Other mlncRNA	Overlap ^{††}	Sense gene ^{††}
		<i>Upf3-1</i>	<i>upf1-1</i>				
Protein-coding	AT1G01060.1	2.19	2.57			*	
Protein-coding	AT1G01860.1	2.92	1.93			*	
Protein-coding	AT1G05160.1	3.30	1.74				
Protein-coding	AT1G06150.1	2.92	2.30			*	
Protein-coding	AT1G07010.1	3.55	3.31			*	
Protein-coding	AT1G07640.1	1.90	2.01			*	
Protein-coding	AT1G10610.1	2.53	1.76				
Protein-coding	AT1G12750.1	2.76	2.68			*	
Protein-coding	AT1G14030.1	1.92	1.45				
Protein-coding	AT1G15165.1	3.27	3.88			*	
Protein-coding	AT1G18773.1	3.92	2.14				
Protein-coding	AT1G29950.1	3.02	3.63			*	
Protein-coding	AT1G32940.1	2.44	2.81			*	
Protein-coding	AT1G34270.1	2.11	1.88			*	
Protein-coding	AT1G36730.1	4.14	3.33			*	
Protein-coding	AT1G50440.1	2.11	2.06			*	
Protein-coding	AT1G51370.1	2.62	2.43			*	
Protein-coding	AT1G53780.1	2.59	1.29				
Protein-coding	AT1G53785.1	2.14	1.38				
Protein-coding	AT1G55910.1	2.61	2.48			*	
Protein-coding	AT1G58160.1	7.04	4.63			*	
Protein-coding	AT1G59620.1	2.86	3.20			*	
Protein-coding	AT1G64140.1	2.08	1.92			*	
Protein-coding	AT1G64430.1	2.18	1.79				
Protein-coding	AT1G65840.1	2.18	2.74			*	
Protein-coding	AT1G66540.1	1.96	2.98			*	
Protein-coding	AT1G67300.1	1.81	1.59				
Protein-coding	AT1G70790.1	3.21	3.15			*	
Protein-coding	AT1G71810.1	2.09	2.33			*	
Protein-coding	AT1G74170.1	2.00	2.07			*	
Protein-coding	AT1G78450.1	3.30	3.14			*	
Protein-coding	AT1G78960.1	2.57	3.28			*	
Protein-coding	AT2G01330.1	3.39	3.34			*	
Protein-coding	AT2G04430.1	2.80	3.61			*	
Protein-coding	AT2G04450.1	2.47	2.94			*	
Protein-coding	AT2G18050.1	3.45	2.78				
Protein-coding	AT2G18560.1	2.93	2.37			*	
Protein-coding	AT2G35130.1	1.84	1.67				
Protein-coding	AT2G37630.1	2.57	3.05			*	
Protein-coding	AT2G38330.1	2.28	2.47			*	
Protein-coding	AT2G38460.1	2.00	1.78				
Protein-coding	AT2G43700.1	2.33	1.83				
Protein-coding	AT2G44850.1	2.14	2.30			*	
Protein-coding	AT2G45770.1	2.48	1.15				
Protein-coding	AT2G45920.1	2.07	1.64				
Protein-coding	AT2G47490.1	2.50	3.30			*	
Protein-coding	AT2G48000.1	2.03	1.89			*	
Protein-coding	AT3G02060.1	1.90	1.54				
Protein-coding	AT3G02370.1	2.72	2.60				
Protein-coding	AT3G03360.1	2.74	3.30			*	
Protein-coding	AT3G06210.1	2.56	2.56			*	
Protein-coding	AT3G08720.1	1.95	1.82				
Protein-coding	AT3G08730.1	3.00	3.08			*	
Protein-coding	AT3G09550.1	1.88	1.75				
Protein-coding	AT3G18000.1	4.78	5.90			*	
Protein-coding	AT3G18500.1	1.95	2.33			*	
Protein-coding	AT3G20080.1	1.91	2.71			*	
Protein-coding	AT3G20120.1	2.13	2.02			*	
Protein-coding	AT3G20620.1	1.96	1.77				
Protein-coding	AT3G21390.1	3.29	3.48			*	
Protein-coding	AT3G24070.1	2.76	2.84			*	
Protein-coding	AT3G26080.1	3.34	3.30				
Protein-coding	AT3G26540.1	1.82	2.09			*	

Category [†]	AGI code [‡]	Fold change [§]		nat-RNA [¶]	Other mlncRNA	Overlap ^{††}	Sense gene ^{††}
		<i>Upf3-1</i>	<i>upf1-1</i>				
Protein-coding	AT3G26950.1	1.85	1.83			*	
Protein-coding	AT3G45443.1	3.48	2.69			*	
Protein-coding	AT3G46370.1	2.02	1.72				
Protein-coding	AT3G53240.1	4.61	5.18			*	
Protein-coding	AT3G53400.1	4.58	5.24			*	
Protein-coding	AT3G56300.1	2.25	3.08			*	
Protein-coding	AT3G56840.1	2.46	2.02			*	
Protein-coding	AT3G58940.1	2.10	1.91			*	
Protein-coding	AT3G60310.1	1.94	2.06			*	
Protein-coding	AT4G00590.1	2.49	2.71			*	
Protein-coding	AT4G03060.1	4.70	2.95			*	
Protein-coding	AT4G03260.1	1.94	2.49			*	
Protein-coding	AT4G07825.1	1.95	1.95			*	
Protein-coding	AT4G11000.1	2.65	2.18			*	
Protein-coding	AT4G13810.1	2.87	2.67			*	
Protein-coding	AT4G15260.1	4.91	3.27			*	
Protein-coding	AT4G15440.1	2.15	2.20			*	
Protein-coding	AT4G18270.1	1.97	2.41			*	
Protein-coding	AT4G19110.1	2.58	3.22			*	
Protein-coding	AT4G19160.1	1.93	1.66				
Protein-coding	AT4G23050.1	1.85	2.16			*	
Protein-coding	AT4G24810.1	2.37	2.73			*	
Protein-coding	AT4G25270.1	2.89	2.26			*	
Protein-coding	AT4G25290.1	2.08	1.77				
Protein-coding	AT4G25600.1	2.71	2.62			*	
Protein-coding	AT4G26520.1	2.08	2.12			*	
Protein-coding	AT4G26555.1	2.16	1.94			*	
Protein-coding	AT4G26850.1	2.55	3.38			*	
Protein-coding	AT4G27820.1	2.49	2.07				
Protein-coding	AT4G30680.1	2.76	2.30			*	
Protein-coding	AT4G30960.1	1.92	1.97			*	
Protein-coding	AT4G31870.1	2.89	2.18				
Protein-coding	AT4G32270.1	2.73	2.88			*	
Protein-coding	AT4G33470.1	2.19	2.22			*	
Protein-coding	AT4G34020.1	2.30	2.17			*	
Protein-coding	AT4G36840.1	4.47	4.50			*	
Protein-coding	AT5G01450.1	2.41	2.60			*	
Protein-coding	AT5G01670.1	2.74	2.02				
Protein-coding	AT5G01810.1	2.19	2.41			*	
Protein-coding	AT5G02650.1	4.29	3.80			*	
Protein-coding	AT5G03406.1	2.85	3.43				
Protein-coding	AT5G04620.1	2.55	2.31				
Protein-coding	AT5G06770.1	2.66	2.26				
Protein-coding	AT5G08510.1	2.40	1.99			*	
Protein-coding	AT5G09460.1	2.82	3.26			*	
Protein-coding	AT5G09670.1	1.92	1.83				
Protein-coding	AT5G10140.1	3.67	1.62				
Protein-coding	AT5G10690.1	2.49	2.16				
Protein-coding	AT5G15410.1	1.87	1.77				
Protein-coding	AT5G15950.1	2.97	6.78			*	
Protein-coding	AT5G16540.1	2.31	2.47			*	
Protein-coding	AT5G17670.1	2.72	2.06			*	
Protein-coding	AT5G19400.1	3.88	2.52			*	
Protein-coding	AT5G20220.1	2.11	2.55			*	
Protein-coding	AT5G23380.1	2.59	1.77				
Protein-coding	AT5G24090.1	3.06	1.81				
Protein-coding	AT5G36940.1	3.92	3.73			*	
Protein-coding	AT5G37260.1	3.35	3.21			*	
Protein-coding	AT5G38590.1	2.14	1.90			*	
Protein-coding	AT5G41130.1	2.02	1.77				
Protein-coding	AT5G45430.1	6.32	7.30			*	
Protein-coding	AT5G47790.1	2.29	2.21			*	
Protein-coding	AT5G47880.1	2.58	5.13			*	
Protein-coding	AT5G48440.1	2.11	2.08			*	

Category [†]	AGI code [‡]	Fold change [§]		nat-RNA [¶]	Other mlncRNA	Overlap ^{††}	Sense gene ^{††}
		<i>Upf3-1</i>	<i>upf1-1</i>				
Protein-coding	AT5G52120.1	1.91	1.41				
Protein-coding	AT5G52550.1	2.14	1.92			*	
Protein-coding	AT5G53900.1	2.20	2.27			*	
Protein-coding	AT5G54520.1	1.99	1.60				
Protein-coding	AT5G55100.1	1.83	1.60				
Protein-coding	AT5G56990.1	4.58	2.86			*	
Protein-coding	AT5G60700.1	2.00	1.58				
Protein-coding	AT5G61930.1	2.40	2.05				
Protein-coding	AT5G64340.1	2.71	2.39			*	
Protein-coding	AT5G65450.1	2.00	2.40			*	
Protein-coding	AT5G66005.1	3.04	2.80			*	
mlncRNA	AT1G01448.1	1.88	1.87	*		*	AT1G01450
mlncRNA	AT1G07728.1	2.58	2.25	*		*	AT1G07725
mlncRNA	AT1G11175.1	1.91	1.75		**		
mlncRNA	AT1G33415.1	3.14	3.60	*		*	AT1G33420, AT1G33430
mlncRNA	AT1G34844.1	3.20	2.96	*		*	AT1G34842
mlncRNA	AT1G48315.1	3.62	3.22	*		*	AT1G48320
mlncRNA	AT1G51645.1	1.91	2.28	*		*	AT1G51640
mlncRNA	AT1G56612.1	3.45	1.92	*			AT1G56610
mlncRNA	AT1G60505.1	2.26	2.16	*		*	AT1G60510
mlncRNA	AT1G60545.1	1.98	2.63	*		*	AT1G60540
mlncRNA	AT1G67792.1	2.82	3.25	*		*	AT1G67790
mlncRNA	AT1G69252.1	4.04	3.63		**	*	
mlncRNA	AT1G72855.1	3.40	2.77	*		*	AT1G72860
mlncRNA	AT1G80325.1	2.03	1.78	*			AT1G80320
mlncRNA	AT2G24755.1	3.31	2.66	*		*	AT2G24750, AT2G24760
mlncRNA	AT2G35945.1	2.78	2.69	*			AT2G35940
mlncRNA	AT2G36792.1	2.51	3.03	*		*	AT2G36790
mlncRNA	AT3G26612.1	3.98	4.27		**	*	
mlncRNA	AT3G27990.1	2.71	3.41		**	*	
mlncRNA	AT3G56408.1	3.72	3.26	*		*	AT3G56410
mlncRNA	AT3G63445.1	3.55	3.04	*		*	AT3G63440
mlncRNA	AT4G37432.1	4.60	4.11	*		*	AT4G37430
mlncRNA	AT5G43403.1	3.03	2.38		**		
mlncRNA	AT5G53048.1	2.71	4.60	*		*	AT5G53050
mlncRNA	AT5G54569.1	3.65	3.01	*		*	AT5G54570
transposon	AT2G13970.1	3.29	3.92			*	
transposon	AT2G13975.1	3.28	2.19				
transposon	AT4G04293.1	3.97	3.25			*	
transposon	AT5G28626.1	2.61	3.28			*	

[†]We classified the up-regulated AGI-annotated genes into 4 categories, protein-coding, mlncRNA, transposon, and other.

[‡]AGI-annotated genes. The genes marked by bold characters indicate exosome substrates reported previously (Chekanova JA, et al. (2007) Genome-wide high resolution mapping of exosome substrates reveals hidden feature in the *Arabidopsis* transcriptome. *Cell* 131:1340–1353).

[§]{Signal Intensity (HLE values) of each gene in *upf1-1* or *upf3-1*} ÷ {Signal Intensity (HLE values) of each gene in wild type}.

[¶]Genes for nat-RNAs are marked by asterisks.

^{||}Genes for other mlncRNA are marked by double asterisks.

^{††}Genes up-regulated in both *upf1-1* and *upf3-1* are marked by asterisks.

^{†††}These represent the sense genes overlapping >1 base with nat-RNAs. The genes marked by bold characters encode transposons or pseudogenes.

Table S3. AGI mlncRNAs expressed in wild type or *upf1-1*

Category [†]	AGI code	Fold change [‡]		Sense gene [§]
		<i>upf1-1</i>	<i>upf3-1</i>	
F _≧ 1.8	AT1G01448.1	1.87	1.88	AT1G01450
F _≧ 1.8	AT1G04295.1	1.81	1.70	AT1G04290
F _≧ 1.8	AT1G07119.1	2.00	2.19	AT1G07120
F _≧ 1.8	AT1G07728.1	2.25	2.58	AT1G07725
F _≧ 1.8	AT1G11592.1	2.52	2.11	
F _≧ 1.8	AT1G17255.1	1.80	1.30	AT1G17250
F _≧ 1.8	AT1G22403.1	2.30	3.56	
F _≧ 1.8	AT1G24148.1	2.82	2.86	
F _≧ 1.8	AT1G33415.1	3.60	3.14	AT1G33420, AT1G33430
F _≧ 1.8	AT1G34844.1	2.96	3.20	AT1G34842
F _≧ 1.8	AT1G48315.1	3.22	3.62	AT1G48320
F _≧ 1.8	AT1G51645.1	2.28	1.91	AT1G5164
F _≧ 1.8	AT1G56612.1	1.92	3.45	AT1G56610
F _≧ 1.8	AT1G60505.1	2.16	2.26	AT1G60510
F _≧ 1.8	AT1G60525.1	3.17	2.80	AT1G60530
F _≧ 1.8	AT1G60545.1	2.63	1.98	AT1G60540
F _≧ 1.8	AT1G67792.1	3.25	2.82	AT1G67790
F _≧ 1.8	AT1G69252.1	3.63	4.04	
F _≧ 1.8	AT1G72855.1	2.77	3.40	AT1G72860
F _≧ 1.8	AT1G78265.1	1.91	2.04	AT1G78270
F _≧ 1.8	AT2G06002.1	5.93	2.03	
F _≧ 1.8	AT2G13665.1	1.90	1.39	AT2G13660
F _≧ 1.8	AT2G15128.1	1.98	1.52	
F _≧ 1.8	AT2G24755.1	2.66	3.31	AT2G24750, AT2G24760
F _≧ 1.8	AT2G32795.1	4.65	4.23	
F _≧ 1.8	AT2G35738.1	2.14	2.30	AT2G35740
F _≧ 1.8	AT2G35945.1	2.69	2.78	AT2G35940
F _≧ 1.8	AT2G36792.1	3.03	2.51	AT2G36790
F _≧ 1.8	AT2G42247.1	2.08	1.48	AT2G42250
F _≧ 1.8	AT2G42485.1	1.91	1.54	
F _≧ 1.8	AT2G44798.1	1.85	1.64	AT2G44800
F _≧ 1.8	AT2G45023.1	1.95	1.90	
F _≧ 1.8	AT3G01142.1	2.33	1.48	AT3G01140
F _≧ 1.8	AT3G04485.1	3.09	2.34	
F _≧ 1.8	AT3G24518.1	2.66	1.99	AT3G24520
F _≧ 1.8	AT3G26612.1	4.27	3.98	
F _≧ 1.8	AT3G27990.1	3.41	2.71	
F _≧ 1.8	AT3G45638.1	2.20	1.49	
F _≧ 1.8	AT3G46658.1	2.23	1.67	AT3G46660
F _≧ 1.8	AT3G48115.1	2.03	2.01	
F _≧ 1.8	AT3G56408.1	3.26	3.72	AT3G56410
F _≧ 1.8	AT3G57157.1	3.44	2.48	
F _≧ 1.8	AT3G59778.1	1.81	1.53	
F _≧ 1.8	AT3G63445.1	3.04	3.55	AT3G63440
F _≧ 1.8	AT4G03935.1	1.85	1.92	
F _≧ 1.8	AT4G04221.1	1.99	1.43	AT4G04220
F _≧ 1.8	AT4G06701.1	3.04	2.87	
F _≧ 1.8	AT4G13495.1	2.09	2.16	
F _≧ 1.8	AT4G26795.1	2.17	1.57	AT4G26790
F _≧ 1.8	AT4G37432.1	4.11	4.60	AT4G37430
F _≧ 1.8	AT5G03285.1	1.92	1.47	
F _≧ 1.8	AT5G09443.1	2.07	2.32	AT5G09445
F _≧ 1.8	AT5G24735.1	1.98	2.38	
F _≧ 1.8	AT5G36002.1	1.86	2.11	AT5G36001, AT5G36000
F _≧ 1.8	AT5G43403.1	2.38	3.03	
F _≧ 1.8	AT5G53048.1	4.60	2.71	AT5G53050
F _≧ 1.8	AT5G54569.1	3.01	3.65	AT5G54570
1.5 _≦ F < 1.8	AT1G11175.1	1.75	1.91	
1.5 _≦ F < 1.8	AT1G46554.1	1.55	1.60	
1.5 _≦ F < 1.8	AT1G67105.1	1.66	2.12	

Category [†]	AGI code	Fold change [‡]		Sense gene [§]
		<i>upf1-1</i>	<i>upf3-1</i>	
1.5≤F < 1.8	AT1G67328.1	1.56	1.53	AT1G67330
1.5≤F < 1.8	AT1G69587.1	1.74	2.20	
1.5≤F < 1.8	AT1G77138.1	1.75	1.38	
1.5≤F < 1.8	AT1G80325.1	1.78	2.03	AT1G80320
1.5≤F < 1.8	AT2G09795.1	1.64	1.68	AT2G09800
1.5≤F < 1.8	AT2G33051.1	1.59	1.12	AT2G33050
1.5≤F < 1.8	AT2G42365.1	1.70	1.42	AT2G42360, AT2G42370
1.5≤F < 1.8	AT3G52072.1	1.68	1.99	AT3G52070
1.5≤F < 1.8	AT3G52535.1	1.58	1.67	AT3G52540
1.5≤F < 1.8	AT4G14548.1	1.53	1.21	
1.5≤F < 1.8	AT5G01175.1	1.76	1.28	AT5G01180
1.5≤F < 1.8	AT5G01595.1	1.73	1.33	AT5G01600
1.5≤F < 1.8	AT5G18255.1	1.71	1.56	AT5G18260
1.5≤F < 1.8	AT5G43725.1	1.51	1.26	
1.2≤F < 1.5	AT1G10682.1	1.24	1.06	
1.2≤F < 1.5	AT1G18415.1	1.46	1.23	AT1G18420
1.2≤F < 1.5	AT1G26208.1	1.35	1.48	AT1G26210
1.2≤F < 1.5	AT1G67365.1	1.44	1.18	AT1G67370
1.2≤F < 1.5	AT1G75295.1	1.41	1.38	AT1G75290, AT1G75300
1.2≤F < 1.5	AT1G76878.1	1.25	1.48	AT1G76880
1.2≤F < 1.5	AT2G14115.1	1.31	1.07	AT2G14120
1.2≤F < 1.5	AT2G21187.1	1.36	0.89	AT2G21185
1.2≤F < 1.5	AT2G21188.1	1.30	1.31	
1.2≤F < 1.5	AT2G22821.1	1.42	0.98	AT2G22820
1.2≤F < 1.5	AT2G23672.1	1.35	1.25	AT2G23670
1.2≤F < 1.5	AT2G26355.1	1.30	1.57	AT2G26360
1.2≤F < 1.5	AT2G30362.1	1.35	0.85	AT2G30360
1.2≤F < 1.5	AT2G31585.1	1.27	1.30	
1.2≤F < 1.5	AT2G44255.1	1.25	1.56	AT2G44260
1.2≤F < 1.5	AT2G46192.1	1.31	1.05	
1.2≤F < 1.5	AT3G21755.1	1.43	1.58	AT3G21760
1.2≤F < 1.5	AT3G22121.1	1.25	1.30	AT3G22120
1.2≤F < 1.5	AT3G51075.1	1.42	1.16	AT3G51070
1.2≤F < 1.5	AT3G51238.1	1.25	0.96	AT3G51240
1.2≤F < 1.5	AT3G62895.1	1.22	1.08	
1.2≤F < 1.5	AT4G08035.1	1.32	1.16	
1.2≤F < 1.5	AT4G12917.1	1.47	1.28	
1.2≤F < 1.5	AT4G26095.1	1.35	1.55	AT4G26090
1.2≤F < 1.5	AT4G31248.1	1.32	1.25	AT4G31250
1.2≤F < 1.5	AT5G05435.1	1.26	1.24	AT5G05430
1.2≤F < 1.5	AT5G06865.1	1.30	1.38	AT5G06860
1.2≤F < 1.5	AT5G18245.1	1.20	0.93	AT5G18240
1.2≤F < 1.5	AT5G41612.1	1.35	0.96	AT5G41610
1.2≤F < 1.5	AT5G48775.1	1.20	1.46	AT5G48770
1.2≤F < 1.5	AT5G59732.1	1.38	1.31	AT5G59730
1.2≤F < 1.5	AT5G64572.1	1.46	1.43	AT5G64570
1.2≤F < 1.5	AT5G66558.1	1.22	1.19	AT5G66560
0.9≤F < 1.2	AT1G11185.1	1.00	0.86	
0.9≤F < 1.2	AT1G13448.1	1.08	1.20	AT1G13450
0.9≤F < 1.2	AT1G16489.1	0.98	1.23	AT1G16490
0.9≤F < 1.2	AT1G29357.1	1.18	1.32	AT1G29355
0.9≤F < 1.2	AT1G31935.1	0.91	0.86	
0.9≤F < 1.2	AT1G34418.1	1.15	0.95	
0.9≤F < 1.2	AT1G58590.1	1.02	1.08	
0.9≤F < 1.2	AT1G74088.1	1.09	1.07	
0.9≤F < 1.2	AT2G07042.1	1.12	2.62	
0.9≤F < 1.2	AT2G13431.1	1.00	0.50	AT2G13430
0.9≤F < 1.2	AT2G15555.1	1.20	1.29	
0.9≤F < 1.2	AT2G18440.1	1.12	1.08	
0.9≤F < 1.2	AT2G18735.1	1.11	0.97	
0.9≤F < 1.2	AT2G41312.1	0.92	0.96	
0.9≤F < 1.2	AT2G43375.1	1.03	1.01	

Category [†]	AGI code	Fold change [‡]		Sense gene [§]
		<i>upf1-1</i>	<i>upf3-1</i>	
0.9 ≦ F < 1.2	AT2G45315.1	1.16	1.01	AT2G45310
0.9 ≦ F < 1.2	AT3G01202.1	0.97	0.87	AT3G01200
0.9 ≦ F < 1.2	AT3G06125.1	1.20	1.31	
0.9 ≦ F < 1.2	AT3G12965.1	0.98	0.83	
0.9 ≦ F < 1.2	AT3G13061.1	1.14	1.06	AT3G13060
0.9 ≦ F < 1.2	AT3G13277.1	1.09	0.96	
0.9 ≦ F < 1.2	AT3G14172.1	0.93	0.87	
0.9 ≦ F < 1.2	AT3G18535.1	0.98	1.28	AT3G18540
0.9 ≦ F < 1.2	AT3G52605.1	0.98	1.17	AT3G52610
0.9 ≦ F < 1.2	AT4G01593.1	1.01	0.98	AT4G01595
0.9 ≦ F < 1.2	AT4G13505.1	0.98	1.22	AT4G13510
0.9 ≦ F < 1.2	AT4G15242.1	0.96	0.86	
0.9 ≦ F < 1.2	AT4G17098.1	1.04	0.97	AT4G17100
0.9 ≦ F < 1.2	AT4G38545.1	1.10	1.41	AT4G38530, AT4G38540
0.9 ≦ F < 1.2	AT4G40065.1	1.00	1.08	
0.9 ≦ F < 1.2	AT5G15845.1	0.99	1.24	AT5G15850
0.9 ≦ F < 1.2	AT5G19221.1	1.12	0.92	AT5G19220
0.9 ≦ F < 1.2	AT5G28262.1	0.95	0.79	
0.9 ≦ F < 1.2	AT5G63195.1	1.09	1.07	AT5G63190
0.9 ≦ F < 1.2	AT5G67488.1	1.16	0.72	AT5G67490
0.6 ≦ F < 0.9	AT1G15175.1	0.86	1.17	AT1G15170
0.6 ≦ F < 0.9	AT1G26218.1	0.77	0.77	AT1G26220
0.6 ≦ F < 0.9	AT1G29785.1	0.87	0.99	AT1G29780
0.6 ≦ F < 0.9	AT1G69572.1	0.71	0.87	AT1G69570
0.6 ≦ F < 0.9	AT1G76892.1	0.80	1.02	AT1G76890
0.6 ≦ F < 0.9	AT3G05905.1	0.66	0.71	AT3G05900
0.6 ≦ F < 0.9	AT3G07215.1	0.87	0.82	
0.6 ≦ F < 0.9	AT4G20362.1	0.67	0.59	AT4G20360
0.6 ≦ F < 0.9	AT4G26488.1	0.75	0.67	AT4G26490
0.6 ≦ F < 0.9	AT4G36648.1	0.77	0.76	
0.6 ≦ F < 0.9	AT5G07322.1	0.67	0.77	

[†]We classified the AGI miRNAs into 6 groups based on the fold (F) changes.

[‡]{Signal Intensity (HLE values) of each gene in *upf1-1* or *upf3-1*} ÷ {Signal Intensity (HLE values) of each gene in wild type}.

[§]These represent the sense genes overlapping more than one base with nat-RNAs.

Table S4. AGI mlncRNAs expressed in wild type or *upf3-1*

Category [†]	AGI code	Fold change [‡]		Sense gene [§]
		<i>upf3-1</i>	<i>upf1-1</i>	
F _≧ 1.8	AT1G01448.1	1.87	1.88	AT1G01450
F _≧ 1.8	AT1G07728.1	2.25	2.58	AT1G07725
F _≧ 1.8	AT1G11175.1	1.75	1.91	
F _≧ 1.8	AT1G11592.1	2.52	2.11	
F _≧ 1.8	AT1G22403.1	2.30	3.56	
F _≧ 1.8	AT1G24148.1	2.82	2.86	
F _≧ 1.8	AT1G33415.1	3.60	3.14	AT1G33420, AT1G33430
F _≧ 1.8	AT1G34844.1	2.96	3.20	AT1G34842
F _≧ 1.8	AT1G48315.1	3.22	3.62	AT1G48320
F _≧ 1.8	AT1G51645.1	2.28	1.91	AT1G51640
F _≧ 1.8	AT1G56612.1	1.92	3.45	AT1G56610
F _≧ 1.8	AT1G60505.1	2.16	2.26	AT1G60510
F _≧ 1.8	AT1G60525.1	3.17	2.80	AT1G60530
F _≧ 1.8	AT1G60545.1	2.63	1.98	AT1G60540
F _≧ 1.8	AT1G67105.1	1.66	2.12	
F _≧ 1.8	AT1G67792.1	3.25	2.82	AT1G67790
F _≧ 1.8	AT1G69252.1	3.63	4.04	
F _≧ 1.8	AT1G69587.1	1.74	2.20	
F _≧ 1.8	AT1G72855.1	2.77	3.40	AT1G72860
F _≧ 1.8	AT1G78265.1	1.91	2.04	AT1G78270
F _≧ 1.8	AT1G80325.1	1.78	2.03	AT1G80320
F _≧ 1.8	AT2G06002.1	5.93	2.03	
F _≧ 1.8	AT2G07042.1	1.12	2.62	
F _≧ 1.8	AT2G24755.1	2.66	3.31	AT2G24750, AT2G24760
F _≧ 1.8	AT2G32795.1	4.65	4.23	
F _≧ 1.8	AT2G35738.1	2.14	2.30	AT2G35740
F _≧ 1.8	AT2G35945.1	2.69	2.78	AT2G35940
F _≧ 1.8	AT2G36792.1	3.03	2.51	AT2G36790
F _≧ 1.8	AT3G04485.1	3.09	2.34	
F _≧ 1.8	AT3G24518.1	2.66	1.99	AT3G24520
F _≧ 1.8	AT3G26612.1	4.27	3.98	
F _≧ 1.8	AT3G27990.1	3.41	2.71	
F _≧ 1.8	AT3G46668.1	2.49	1.86	
F _≧ 1.8	AT3G48115.1	2.03	2.01	
F _≧ 1.8	AT3G52072.1	1.68	1.99	AT3G52070
F _≧ 1.8	AT3G56408.1	3.26	3.72	AT3G56410
F _≧ 1.8	AT3G57157.1	3.44	2.48	
F _≧ 1.8	AT3G63445.1	3.04	3.55	AT3G63440
F _≧ 1.8	AT4G03935.1	1.85	1.92	
F _≧ 1.8	AT4G06701.1	3.04	2.87	
F _≧ 1.8	AT4G13495.1	2.09	2.16	
F _≧ 1.8	AT4G37432.1	4.11	4.60	AT4G37430
F _≧ 1.8	AT4G38215.1	1.77	2.08	AT4G38210
F _≧ 1.8	AT5G09443.1	2.07	2.32	AT5G09445
F _≧ 1.8	AT5G24735.1	1.98	2.38	
F _≧ 1.8	AT5G36002.1	1.86	2.11	AT5G36001, AT5G36000
F _≧ 1.8	AT5G43403.1	2.38	3.03	
F _≧ 1.8	AT5G53048.1	4.60	2.71	AT5G53050
F _≧ 1.8	AT5G54569.1	3.01	3.65	AT5G54570
1.5 _≧ F < 1.8	AT1G04295.1	1.81	1.70	AT1G04290
1.5 _≧ F < 1.8	AT1G46554.1	1.55	1.60	
1.5 _≧ F < 1.8	AT1G52347.1	1.83	1.77	
1.5 _≧ F < 1.8	AT1G67328.1	1.56	1.53	AT1G67330
1.5 _≧ F < 1.8	AT2G09795.1	1.64	1.68	AT2G09800
1.5 _≧ F < 1.8	AT2G15128.1	1.98	1.52	
1.5 _≧ F < 1.8	AT2G26355.1	1.30	1.57	AT2G26360
1.5 _≧ F < 1.8	AT2G42485.1	1.91	1.54	
1.5 _≧ F < 1.8	AT2G44255.1	1.25	1.56	AT2G44260
1.5 _≧ F < 1.8	AT2G44798.1	1.85	1.64	AT2G44800
1.5 _≧ F < 1.8	AT3G21755.1	1.43	1.58	AT3G21760

Category [†]	AGI code	Fold change [‡]		Sense gene [§]
		<i>upf3-1</i>	<i>upf1-1</i>	
1.5 \leq F < 1.8	AT3G46658.1	2.23	1.67	AT3G46660
1.5 \leq F < 1.8	AT3G52535.1	1.58	1.67	AT3G52540
1.5 \leq F < 1.8	AT3G59778.1	1.81	1.53	
1.5 \leq F < 1.8	AT4G26095.1	1.35	1.55	AT4G26090
1.5 \leq F < 1.8	AT4G26795.1	2.17	1.57	AT4G26790
1.5 \leq F < 1.8	AT4G37225.1	1.62	1.55	AT4G37230
1.5 \leq F < 1.8	AT5G18255.1	1.71	1.56	AT5G18260
1.5 \leq F < 1.8	AT5G65575.1	1.69	1.75	AT5G65580
1.2 \leq F < 1.5	AT1G13448.1	1.08	1.20	AT1G13450
1.2 \leq F < 1.5	AT1G16489.1	0.98	1.23	AT1G16490
1.2 \leq F < 1.5	AT1G18415.1	1.46	1.23	AT1G18420
1.2 \leq F < 1.5	AT1G26208.1	1.35	1.48	AT1G26210
1.2 \leq F < 1.5	AT1G29357.1	1.18	1.32	AT1G29355
1.2 \leq F < 1.5	AT1G75295.1	1.41	1.38	AT1G75290, AT1G75300 AT1G76880
1.2 \leq F < 1.5	AT1G76878.1	1.25	1.48	
1.2 \leq F < 1.5	AT1G77138.1	1.75	1.38	
1.2 \leq F < 1.5	AT2G13665.1	1.90	1.39	AT2G13660
1.2 \leq F < 1.5	AT2G15555.1	1.20	1.29	
1.2 \leq F < 1.5	AT2G21188.1	1.30	1.31	
1.2 \leq F < 1.5	AT2G23672.1	1.35	1.25	AT2G23670
1.2 \leq F < 1.5	AT2G24545.1	1.14	1.26	AT2G24540
1.2 \leq F < 1.5	AT2G31585.1	1.27	1.30	
1.2 \leq F < 1.5	AT2G33815.1	1.02	1.36	AT2G33810
1.2 \leq F < 1.5	AT2G42247.1	2.08	1.48	AT2G42250
1.2 \leq F < 1.5	AT2G42365.1	1.70	1.42	AT2G42360, AT2G42370 AT3G01140
1.2 \leq F < 1.5	AT3G01142.1	2.33	1.48	
1.2 \leq F < 1.5	AT3G06125.1	1.20	1.31	
1.2 \leq F < 1.5	AT3G18535.1	0.98	1.28	AT3G18540
1.2 \leq F < 1.5	AT3G22121.1	1.25	1.30	AT3G22120
1.2 \leq F < 1.5	AT3G29644.1	1.05	1.23	AT3G29642
1.2 \leq F < 1.5	AT4G04221.1	1.99	1.43	AT4G04220
1.2 \leq F < 1.5	AT4G12917.1	1.47	1.28	
1.2 \leq F < 1.5	AT4G13505.1	0.98	1.22	AT4G13510
1.2 \leq F < 1.5	AT4G14548.1	1.53	1.21	
1.2 \leq F < 1.5	AT4G25719.1	1.20	1.39	AT4G25720
1.2 \leq F < 1.5	AT4G31248.1	1.32	1.25	AT4G31250
1.2 \leq F < 1.5	AT4G38545.1	1.10	1.41	AT4G38530, AT4G38540
1.2 \leq F < 1.5	AT5G01175.1	1.76	1.28	AT5G01180
1.2 \leq F < 1.5	AT5G01595.1	1.73	1.33	AT5G01600
1.2 \leq F < 1.5	AT5G03285.1	1.92	1.47	
1.2 \leq F < 1.5	AT5G05435.1	1.26	1.24	AT5G05430
1.2 \leq F < 1.5	AT5G06865.1	1.30	1.38	AT5G06860
1.2 \leq F < 1.5	AT5G15845.1	0.99	1.24	AT5G15850
1.2 \leq F < 1.5	AT5G43725.1	1.51	1.26	
1.2 \leq F < 1.5	AT5G48775.1	1.20	1.46	AT5G48770
1.2 \leq F < 1.5	AT5G59732.1	1.38	1.31	AT5G59730
1.2 \leq F < 1.5	AT5G64572.1	1.46	1.43	AT5G64570
0.9 \leq F < 1.2	AT1G10682.1	1.24	1.06	
0.9 \leq F < 1.2	AT1G15175.1	0.86	1.17	AT1G15170
0.9 \leq F < 1.2	AT1G29785.1	0.87	0.99	AT1G29780
0.9 \leq F < 1.2	AT1G34418.1	1.15	0.95	
0.9 \leq F < 1.2	AT1G53801.1	0.98	1.17	AT1G53800
0.9 \leq F < 1.2	AT1G58590.1	1.02	1.08	
0.9 \leq F < 1.2	AT1G67365.1	1.44	1.18	AT1G67370
0.9 \leq F < 1.2	AT1G71528.1	1.21	1.04	AT1G71530
0.9 \leq F < 1.2	AT1G74088.1	1.09	1.07	
0.9 \leq F < 1.2	AT1G76892.1	0.80	1.02	AT1G76890
0.9 \leq F < 1.2	AT2G14115.1	1.31	1.07	AT2G14120
0.9 \leq F < 1.2	AT2G18440.1	1.12	1.08	
0.9 \leq F < 1.2	AT2G18735.1	1.11	0.97	
0.9 \leq F < 1.2	AT2G22821.1	1.42	0.98	AT2G22820

Category [†]	AGI code	Fold change [‡]		Sense gene [§]
		<i>upf3-1</i>	<i>upf1-1</i>	
0.9 ≤ F < 1.2	AT2G41312.1	0.92	0.96	
0.9 ≤ F < 1.2	AT2G43375.1	1.03	1.01	
0.9 ≤ F < 1.2	AT2G45315.1	1.16	1.01	AT2G45310
0.9 ≤ F < 1.2	AT2G46192.1	1.31	1.05	
0.9 ≤ F < 1.2	AT3G13061.1	1.14	1.06	AT3G13060
0.9 ≤ F < 1.2	AT3G13277.1	1.09	0.96	
0.9 ≤ F < 1.2	AT3G51075.1	1.42	1.16	AT3G51070
0.9 ≤ F < 1.2	AT3G52605.1	0.98	1.17	AT3G52610
0.9 ≤ F < 1.2	AT3G54625.1	0.75	1.07	AT3G54630
0.9 ≤ F < 1.2	AT3G62895.1	1.22	1.08	
0.9 ≤ F < 1.2	AT4G01593.1	1.01	0.98	AT4G01595
0.9 ≤ F < 1.2	AT4G08035.1	1.32	1.16	
0.9 ≤ F < 1.2	AT4G17098.1	1.04	0.97	AT4G17100
0.9 ≤ F < 1.2	AT4G40065.1	1.00	1.08	
0.9 ≤ F < 1.2	AT5G18245.1	1.20	0.93	AT5G18240
0.9 ≤ F < 1.2	AT5G19221.1	1.12	0.92	AT5G19220
0.9 ≤ F < 1.2	AT5G41612.1	1.35	0.96	AT5G41610
0.9 ≤ F < 1.2	AT5G63195.1	1.09	1.07	AT5G63190
0.9 ≤ F < 1.2	AT5G66558.1	1.22	1.19	AT5G66560
0.6 ≤ F < 0.9	AT1G11185.1	1.00	0.86	
0.6 ≤ F < 0.9	AT1G26218.1	0.77	0.77	AT1G26220
0.6 ≤ F < 0.9	AT1G31935.1	0.91	0.86	
0.6 ≤ F < 0.9	AT1G69572.1	0.71	0.87	AT1G69570
0.6 ≤ F < 0.9	AT2G21187.1	1.36	0.89	AT2G21185
0.6 ≤ F < 0.9	AT2G30362.1	1.35	0.85	AT2G30360
0.6 ≤ F < 0.9	AT3G05905.1	0.66	0.71	AT3G05900
0.6 ≤ F < 0.9	AT3G07215.1	0.87	0.82	
0.6 ≤ F < 0.9	AT3G12965.1	0.98	0.83	
0.6 ≤ F < 0.9	AT3G14172.1	0.93	0.87	
0.6 ≤ F < 0.9	AT4G15242.1	0.96	0.86	
0.6 ≤ F < 0.9	AT4G26488.1	0.75	0.67	AT4G26490
0.6 ≤ F < 0.9	AT4G36648.1	0.77	0.76	
0.6 ≤ F < 0.9	AT5G07322.1	0.67	0.77	
0.6 ≤ F < 0.9	AT5G28262.1	0.95	0.79	
0.6 ≤ F < 0.9	AT5G67488.1	1.16	0.72	AT5G67490
0 ≤ F < 0.6	AT2G13431.1	1.00	0.50	AT2G13430
0 ≤ F < 0.6	AT4G20362.1	0.67	0.59	AT4G20360

[†]We classified the AGI miRNAs into 6 groups based on the fold (F) changes.

[‡]{Signal Intensity (HLE values) of each gene in *upf1-1* or *upf3-1*} ÷ {Signal Intensity (HLE values) of each gene in wild type}.

[§]These represent the sense genes overlapping more than one base with nat-RNAs.

Table S5. Non-AGI TUs up-regulated in *upf1-1*

Group ID [†]	Chr	Strand	Start	End	Fold change [‡]		Sense gene [§]	nat-RNA	incRNA
					<i>upf1-1</i>	<i>upf3-1</i>			
Group64	1	+	1645624	1647236	1.99	1.91	AT1G05560	*	
Group70	1	+	1820521	1821900	3.50	3.90	AT1G06000	*	
Group78	1	+	2034228	2035826	1.83	1.62			**
Group111	1	-	2718591	2722018	1.89	2.12	AT1G08590	*	
Group172	1	+	4478273	4483579	1.82	1.56	AT1G13140, AT1G13150	*	
Group289	1	-	7892669	7894604	2.18	2.11			**
Group308	1	+	8188317	8189046	2.63	2.08	AT1G23090	*	
Group314	1	+	8331054	8332295	1.98	1.49			**
Group397	1	-	11553272	11556478	2.04	2.32	AT1G32120	*	
Group417	1	+	12418474	12422531	2.60	1.96	AT1G34110	*	
Group435	1	+	13899763	13901248	2.16	3.00	AT1G36730, AT1G36732	*	
Group475	1	+	17395028	17395388	2.57	0.32			**
Group597	1	-	21583385	21584033	2.40	1.85			**
Group725	1	+	26075985	26078064	2.15	1.78	AT1G69360	*	
Group764	1	+	27213554	27216358	2.17	1.63	AT1G72270, AT1G72280	*	
Group818	1	-	28518919	28519508	12.14	12.89			**
Group906	2	+	280092	281191	1.92	1.47	AT2G01630, AT2G01630	*	
Group920	2	+	565065	566083	2.07	1.46			**
Group946	2	+	1930928	1934140	1.84	1.36	AT2G05310	*	
Group998	2	+	3417677	3426149	1.82	1.06			**
Group1026	2	+	5016329	5017063	5.41	1.04			**
Group1027	2	+	5056815	5057527	2.47	2.22	AT2G12461, AT2G12462	*	
Group1060	2	+	6673676	6675345	2.40	1.90	AT2G15320	*	
Group1112	2	+	8360362	8362997	1.84	1.64			**
Group1159	2	+	9510657	9511674	3.05	2.99			**
Group1168	2	+	9749641	9750442	3.07	2.65	AT2G22890	*	
Group1280	2	+	13116951	13117378	6.57	2.18	AT2G30770	*	
Group1320	2	+	14126621	14128768	1.96	2.00	AT2G33320	*	
Group1387	2	+	15680729	15682953	2.07	1.89	AT2G37360	*	
Group1413	2	-	16231245	16233757	2.88	2.85	AT2G38823, AT2G38830	*	
Group1422	2	+	16453821	16456659	1.89	1.57	AT2G39380	*	
Group1595	3	+	1181672	1182897	2.14	2.18			**
Group1626	3	+	1925573	1925958	2.91	1.54	AT3G06350	*	
Group1825	3	+	6057000	6061961	2.00	1.66			**
Group1846	3	+	6714696	6716016	2.34	2.22	AT3G19380	*	
Group1927	3	-	9571587	9573211	2.41	3.21			**
Group2022	3	+	16659289	16660857	2.98	1.95	AT3G45390	*	
Group2032	3	+	17171479	17172041	4.41	2.44	AT3G46610	*	
Group2035	3	-	17196438	17196895	3.01	4.44			**
Group2097	3	+	19064514	19064961	3.06	3.26	AT3G51330	*	
Group2100	3	+	19108921	19111426	2.71	2.34	AT3G51470	*	
Group2116	3	-	19442399	19442794	4.29	6.45	AT3G52430	*	
Group2188	3	+	21161727	21162558	3.22	3.96	AT3G57140, AT3G57140	*	
Group2203	3	-	21523010	21524842	2.12	1.98			**
Group2208	3	-	21803147	21804844	2.22	2.57			**
Group2217	3	-	22198312	22199541	2.02	1.65	AT3G60080	*	
Group2224	3	+	22586568	22588503	3.86	3.35			**
Group2246	3	+	23133852	23134110	3.42	1.35			**
Group2263	3	+	23438480	23440017	2.29	1.91	AT3G63450, AT3G63450	*	
Group2316	4	-	1373192	1374593	3.71	2.66	AT4G03100	*	
Group2353	4	-	3356796	3357763	2.49	1.54	AT4G06534	*	
Group2357	4	+	3663458	3665878	2.01	2.21			**
Group2368	4	+	5637690	5640685	1.85	1.49	AT4G08850, AT4G08850	*	
Group2443	4	+	8035714	8038016	2.19	1.55			**

Group ID [†]	Chr	Strand	Start	End	Fold change [‡]		Sense gene [§]	nat-RNA [¶]	incRNA
					<i>upf1-1</i>	<i>upf3-1</i>			
Group2466	4	+	8852801	8855318	1.94	1.63	AT4G15490	*	
Group2553	4	+	12044238	12045716	2.18	1.82	AT4G22980	*	
Group2556	4	-	12152516	12153374	2.28	1.70			**
Group2600	4	+	13243137	13245714	2.85	1.90	AT4G26140, AT4G26140	*	
Group2607	4	+	13413633	13416087	1.91	2.73	AT4G26590	*	
Group2635	4	+	14144297	14147590	2.06	2.94	AT4G28650	*	
Group2702	4	+	16102719	16104057	2.25	1.70	AT4G33470	*	
Group2750	4	+	17043854	17047333	2.95	2.94	AT4G36020, AT4G36030	*	
Group2788	4	+	17944581	17946703	2.51	2.44	AT4G38300	*	
Group2863	5	+	1206258	1206922	2.47	3.51	AT5G04310	*	
Group2870	5	-	1341934	1343483	3.89	4.26			**
Group2871	5	+	1354505	1355594	1.87	2.10	AT5G04700	*	
Group2938	5	+	2944341	2945426	1.91	2.33	AT5G09460, AT5G09461, AT5G09462, AT5G09463	*	
Group3010	5	+	4841235	4842091	3.23	2.40	AT5G14950	*	
Group3094	5	+	7417960	7421219	2.19	1.71	AT5G22390	*	
Group3235	5	+	16051737	16056185	2.19	2.11			**
Group3284	5	+	17348269	17348857	2.99	1.84	AT5G43170	*	
Group3305	5	-	17983301	17983778	2.21	1.71			**
Group3331	5	+	18787333	18787793	2.46	2.92	AT5G46280	*	
Group3418	5	+	21957534	21958857	2.69	2.12	AT5G54067	*	
Group3551	5	+	25747745	25748963	1.99	2.37	AT5G64340, AT5G64341, AT5G64342, AT5G64343	*	
Group3567	5	+	26179117	26180563	2.31	2.29	AT5G65460	*	
Group3580	5	+	26553549	26554027	2.77	3.44			**

[†]When the non-AGI TUs, which are located on same strand of the genome, overlapped each other by >1 base, they were classified into the same group. The groups marked by bold characters include short segment(s) of the repeat sequence(s) originated from transposable or retrotransposable elements (E-value < 0.01).

[‡]{Signal Intensity (HLE values) of each gene in *upf1-1* or *upf3-1*} ÷ {Signal Intensity (HLE values) of each gene in wild type}.

[§]These represent the sense genes overlapping >1 base with non-AGI TUs.

[¶]TUs for putative nat-RNAs are marked by asterisks.

^{||}TUs for putative incRNAs are marked by double asterisks.

Table S6. Non-AGI TUs up-regulated in *upf3-1*

Group ID [†]	Chr	Strand	Start	End	Fold change [‡]		Sense gene [§]	nat-RNA [¶]	incRNA
					<i>upf3-1</i>	<i>upf1-1</i>			
Group47	1	+	1128522	1129624	2.01	1.58	AT1G04240	*	
Group64	1	+	1645624	1647236	1.91	1.99	AT1G05560	*	
Group70	1	+	1820521	1821900	3.90	3.50	AT1G06000	*	
Group111	1	-	2718591	2722018	2.12	1.89	AT1G08590	*	
Group289	1	-	7892669	7894604	2.11	2.18			**
Group308	1	+	8188317	8189046	2.08	2.63	AT1G23090	*	
Group384	1	+	11134450	11134878	2.55	1.96			**
Group397	1	-	11553272	11556478	2.32	2.04	AT1G32120	*	
Group417	1	+	12418474	12422531	1.96	2.60	AT1G34110	*	
Group435	1	+	13899763	13901248	3.00	2.16	AT1G36730, AT1G36732	*	
Group643	1	+	23459834	23460893	2.24	1.57	AT1G63240	*	
Group722	1	-	26040803	26041163	6.98	3.57	AT1G69252	*	
Group757	1	+	26937061	26938995	1.94	1.87	AT1G71490	*	
Group816	1	+	28467918	28471284	1.87	1.68	AT1G75820	*	
Group818	1	-	28518919	28519508	12.89	12.14			**
Group1027	2	+	5056815	5057527	2.22	2.47	AT2G12461, AT2G12462	*	
Group1039	2	+	5868669	5869613	2.39	2.37			**
Group1052	2	+	6510456	6513421	1.90	1.47	AT2G15029	*	
Group1159	2	+	9510657	9511674	2.99	3.05			**
Group1168	2	+	9749641	9750442	2.65	3.07	AT2G22890	*	
Group1223	2	-	11519957	11520505	4.82	2.87	AT2G26975	*	
Group1320	2	+	14126621	14128768	2.00	1.96	AT2G33320	*	
Group1387	2	+	15680729	15682953	1.89	2.07	AT2G37360	*	
Group1413	2	-	16231245	16233757	2.85	2.88	AT2G38823, AT2G38830	*	
Group1579	3	+	794536	794819	3.47	5.17			**
Group1595	3	+	1181672	1182897	2.18	2.14			**
Group1765	3	+	4492977	4493563	3.38	3.90	AT3G13700, AT3G13700, AT3G13710	*	
Group1926	3	-	9557183	9558737	2.40	1.99			**
Group1927	3	-	9571587	9573211	3.21	2.41			**
Group2035	3	-	17196438	17196895	4.44	3.01			**
Group2087	3	+	18873130	18874112	1.87	1.60	AT3G50750	*	
Group2097	3	+	19064514	19064961	3.26	3.06	AT3G51330	*	
Group2116	3	-	19442399	19442794	6.45	4.29	AT3G52430	*	
Group2159	3	+	20427473	20429724	3.03	1.80	AT3G55090	*	
Group2188	3	+	21161727	21162558	3.96	3.22	AT3G57140, AT3G57140	*	
Group2208	3	-	21803147	21804844	2.57	2.22			**
Group2224	3	+	22586568	22588503	3.35	3.86			**
Group2263	3	+	23438480	23440017	1.91	2.29	AT3G63450, AT3G63450	*	
Group2357	4	+	3663458	3665878	2.21	2.01			**
Group2600	4	+	13243137	13245714	1.90	2.85	AT4G26140, AT4G26140	*	
Group2607	4	+	13413633	13416087	2.73	1.91	AT4G26590	*	
Group2635	4	+	14144297	14147590	2.94	2.06	AT4G28650	*	
Group2750	4	+	17043854	17047333	2.94	2.95	AT4G36020, AT4G36030	*	
Group2770	4	+	17616922	17617496	3.30	2.89	AT4G37470	*	
Group2788	4	+	17944581	17946703	2.44	2.51	AT4G38300	*	
Group2860	5	-	1151024	1152280	1.93	1.47	AT5G04190	*	
Group2863	5	+	1206258	1206922	3.51	2.47	AT5G04310	*	
Group2870	5	-	1341934	1343483	4.26	3.89			**
Group2871	5	+	1354505	1355594	2.10	1.87	AT5G04700	*	
Group2876	5	-	1420729	1422576	3.31	1.96			**
Group3235	5	+	16051737	16056185	2.11	2.19			**
Group3293	5	-	17732973	17734732	1.87	1.67	AT5G44030	*	
Group3327	5	-	18710198	18711386	2.31	1.51	AT5G46090	*	
Group3331	5	+	18787333	18787793	2.92	2.46	AT5G46280	*	

Group ID [†]	Chr	Strand	Start	End	Fold change [‡]		Sense gene [§]	nat-RNA [¶]	incRNA
					<i>upf3-1</i>	<i>upf1-1</i>			
Group3418	5	+	21957534	21958857	2.12	2.69	AT5G54067	*	
Group3477	5	-	23862354	23864453	2.00	1.63	AT5G59070	*	
Group3551	5	+	25747745	25748963	2.37	1.99	AT5G64340, AT5G64341, AT5G64342, AT5G64343	*	
Group3567	5	+	26179117	26180563	2.29	2.31	AT5G65460	*	
Group3580	5	+	26553549	26554027	3.44	2.77			**

[†]When the non-AGI TUs, which are located on same strand of the genome, overlapped each other by >1 base, they were classified into the same group. The groups marked by bold characters include short segment(s) of the repeat sequence(s) originated from transposable or retrotransposable elements (*E* value < 0.01).

[‡]{Signal Intensity (HLE values) of each gene in *upf1-1* or *upf3-1*} ÷ {Signal Intensity (HLE values) of each gene in wild type}.

[§]These represent the sense genes overlapping more than one base with non-AGI TUs.

[¶]TUs for putative nat-RNAs are marked by asterisks.

^{||}TUs for putative incRNAs are marked by double asterisks.

Table S7. List of the primers used in quantitative RT-PCR

Name	Sequence
At1g11592RTforward	CCTGCAAGATCAAGTCACAAAC
At1g11592RTreverse	CCAACAGATGTTATGACTCAAGC
At1g22403RTforward	TGTTTGGCCTGAATTGTGACATG
At1g22403RTreverse	CGAATGAGATGATGCGTTGTG
At1g24148RTforward	GAACAAGAAAGGTAATGGCTTCG
At1g24148RTreverse	CACAACGTTGGGTGGTAACG
At1g69252RTforward	GGCTTCGTCGACATATATTGG
At1g69252RTreverse	GAAAGAGCTTTGAATCTTCATCTC
At2g32795RTforward	AGAGACGATGACGTATCACG
At2g32795RTreverse	CTCCTCAACGATTACTCTCCA
At3g04485RTforward	CTCATCTTCTGGTTCGTTACC
At3g04485RTreverse	TAACACATACCCTGTACCAAG
At3g26612RTforward	TAAAGTTATGGATAACAGAGGTCAG
At3g26612RTreverse	ATTGGAACAACATCCATGAAAGG
At4g06701RTforward	CAAGCTGCGACTCTGTGATC
At4g06701RTreverse	GCCATTGCAAGAAGTACAAATCC
At5g43403RTforward	GTGAAGCTTCCTGAGAACATTG
At5g43403RTreverse	GCTTTCTAAAGGTATGAATCTAACC
G818RTforward	AACTCGTCTCTTCTCCTTCATG
G818RTreverse	CAATTATGGGTCAGGTCCATTAC
G2870RTforward	CGTGGAATTCATCAATAGGAGAC
G2870RTreverse	ATTCCGAGGTCGCTAGCCAA
ACT2RTforward	CTCAGGTATCGCTGACCGTATGAG
ACT2RTreverse	CTTGGAGATCCACATCTGCTGGAATG

Table S8. List of the primers used in 5'RACE-based quantitative RT-PCR

Name	Sequence
GeneRacer 5' Primer (F1)	CGACTGGAGCACGAGGACACTGA
GeneRacer 5' Nested Primer (F2)	GGACACTGACATGGACTGAAGGAGTA
At1g07728R1	CCTAGCGAACCACTCCATTACGTTG
At1g34844R1	GACTCTGCTTTCAAGACCAATTGTGC
At1g48315R1	CGCTGGAATCAACTCTCAATCAACCA
At1g60505R1	GCGAGTGTTGGAGATTGTTGAAATGGAG
At1g60525R1	GTGTTCTTGAGTCGTTGGCAGGAATC
At1g60545R1	GTGTTGCACGATGAGAATAAACCTGAGA
At1g67792R1	CACCAACACAGAACAAAACCTACGAGATC
At2g24755R1	CTCCCGAAATAAGCGCATCTTTGAGAAG
At2g35945R1	CAGCAGTTCGTCGGAATACCACTC
At3g24518R1	TGATGCTCGAGAAAGAACGGACAAAGC
At3g56408R1	TAATCCTGATGGAAGTCATCTGACGTG
At4g37432R1	CTTACGGATGCTCACACGCCTCTCA
At5g54569R1	GGGAATCAGGAAACTGGCAGTGTATG
G2097R1	GTTGCAGAGAACTTCATGTCTGGCTAC
G2116R1	CTCTCTACTCGATATCCAATCATGGACG
G2188R1	CTTCACGGTTGTACCAGCATATCGTG
G2750R1	GAGCGTTATGGAAACTCGCTGTAG
ACT2R1	CTTGAGATCCACATCTGCTGGAATG