

**Table S1.** Predicted canonical uORFs of *ATG* genes in yeast.

CDS	Gene	Initiator site	Length	uORF end to CDS	Ribosomes bound	Type	Tested in this study
YPR185W	<i>ATG13</i>	aatagcATGagt	141	-133	0	CDS partial	Yes
YPL149W	<i>ATG5</i>	taaataATGaag	9	76	0	UTR only	No
YPL149W	<i>ATG5</i>	agtagcATGctc	42	33	3	UTR only	Yes
YPL149W	<i>ATG5</i>	gtgcgaATGaata	51	8	5	UTR only	Yes
YPL149W	<i>ATG5</i>	aaacctATGatg	9	3	2	UTR only	Yes
YPL149W	<i>ATG5</i>	cctatgATGtaa	6	3	1	UTR only	Yes
YBR217W	<i>ATG12</i>	gaaccaATGaca	12	-3	0	CDS partial	Yes
YOL082W	<i>ATG19</i>	tagtatATGttt	12	134	0	UTR only	No
YOL082W	<i>ATG19</i>	atctccATGata	9	92	0	UTR only	No
YOL082W	<i>ATG19</i>	catgatATGagt	48	48	0	UTR only	Yes

**Table S2.** Predicted uORFs (canonical and non-canonical) of *ATG* genes in human.

uORF_ID	uORF_score	Start_codon	Chromosome	Strand	Start_coordinate	End_coordinate	Gene	Additional_transcripts	Type	Peptide_score
ENST00000288828.4.uORF_ATG.1	26.39566736	ATG	chr7	+	5229910	5229984	<i>WIP12</i>	ENST00000404704.3.uORF_ATG.1,ENST00000382384.2.uORF_ATG.1,ENST00000401525.3.uORF_ATG.1	UTR only	0.00031291
ENST00000321867.4.uORF_GTG.1	26.11407861	GTG	chr12	+	132379311	132379490	<i>ULK1</i>	-	UTR only	0.00087758
ENST00000321867.4.uORF_ATC.1	25.57937761	ATC	chr12	+	132379281	132379490	<i>ULK1</i>	-	UTR only	0.00031291
ENST00000321867.4.uORF_TTG.4	25.57261685	TTG	chr12	+	132379503	132379610	<i>ULK1</i>	-	CDSpartial	0.8038648
ENST00000321867.4.uORF_CTG.1	25.53682078	CTG	chr12	+	132379357	132380180	<i>ULK1</i>	-	CDSpartial	0.00087758
ENST00000359933.4.uORF_ATG.4	25.51729724	ATG	chr14	-	96829466	96829452	<i>ATG2B</i>	-	UTRonly	0.00198221
ENST00000321867.4.uORF_ATG.1	25.45758162	ATG	chr12	+	132379395	132379490	<i>ULK1</i>	-	UTR only	0.9026072
ENST00000037243.2.uORF_CTG.3	25.3849053	CTG	chr16	+	75600297	75600338	<i>GABARAPL2</i>	ENST00000565057.1.uORF_CTG.2,ENST00000563744.1.uORF_CTG.2	UTR only	0.00198221
ENST00000321867.4.uORF_TTG.2	25.1779686	TTG	chr12	+	132379230	132379490	<i>ULK1</i>	-	UTR only	0.00031291
ENST00000359933.4.uORF_ATG.2	25.08050635	ATG	chr14	-	96830013	96829405	<i>ATG2B</i>	-	UTR only	0.00087758
ENST00000359933.4.uORF_ATG.3	25.04909199	ATG	chr14	-	96829655	96829452	<i>ATG2B</i>	-	UTR only	0.00087758
ENST00000321867.4.uORF_TTG.3	24.99563968	TTG	chr12	+	132379253	132379297	<i>ULK1</i>	-	UTR only	0.00198221
ENST00000321867.4.uORF_ATT.2	24.97137523	ATT	chr12	+	132379293	132379490	<i>ULK1</i>	-	UTR only	0.00087758
ENST00000321867.4.uORF_ATG.2	24.86704554	ATG	chr12	+	132379416	132379490	<i>ULK1</i>	-	UTR only	0.8038648
ENST00000321867.4.uORF_ATT.1	24.77298914	ATT	chr12	+	132379287	132379490	<i>ULK1</i>	-	UTR only	0.00031291
ENST00000359933.4.uORF_AC G.1	24.68345834	ACG	chr14	-	96830160	96829405	<i>ATG2B</i>	-	UTR only	0.00087758
ENST00000396761.2.uORF_ATT.1	24.64434127	ATT	chr2	-	220094417	220094337	<i>ATG9A</i>	-	UTR only	0.00010328
ENST00000321867.4.uORF_TTG.1	24.64222352	TTG	chr12	+	132379219	132380180	<i>ULK1</i>	-	CDSpartial	0.00028977
ENST00000359933.4.uORF_CT G.9	24.50051499	CTG	chr14	-	96829795	96829652	<i>ATG2B</i>	-	UTR only	0.00087758

ENST0000037243.2.uORF_GT G.3	24.43442655	GTG	chr16	+	75600330	75600338	<i>GABARAP L2</i>	ENST00000565057.1.uORF_GTG.3,ENST00000563744.1.uORF_GTG.2	UTR only	1.06E-05
ENST00000359933.4.uORF_AT G.5	24.39813749	ATG	chr14	-	96829428	96829405	<i>ATG2B</i>	-	UTR only	0.00198221
ENST00000396761.2.uORF_TTG .1	24.38327965	TTG	chr2	-	220094416	220094363	<i>ATG9A</i>	-	UTR only	0.00070728
ENST00000359933.4.uORF_GT G.6	24.33620621	GTG	chr14	-	96829751	96829698	<i>ATG2B</i>	-	UTR only	0.00028977
ENST00000288828.4.uORF_AT C.1	24.22868091	ATC	chr7	+	5229925	5229984	<i>WIP12</i>	ENST00000404704.3.uORF_ATC.1,ENST00000382384.2.uORF_ATC.1,ENST00000401525.3.uORF_ATC.1	UTR only	0.325226
ENST00000268607.5.uORF_AT G.4	24.19759218	ATG	chr16	+	87425838	87425879	<i>MAP1LC3 B</i>	-	UTR only	0.9026072
ENST00000359933.4.uORF_CT G.11	24.1535456	CTG	chr14	-	96829710	96829405	<i>ATG2B</i>	-	UTR only	0.00087758
ENST00000321867.4.uORF_CT G.5	24.14771579	CTG	chr12	+	132379540	132380180	<i>ULK1</i>	-	CDSpartial	0.00087758
ENST00000288828.4.uORF_AC G.1	24.11097963	ACG	chr7	+	5229905	5229913	<i>WIP12</i>	ENST00000382384.2.uORF_AC G.1,ENST00000404704.3.uORF_AC G.1,ENST00000401525.3.uORF_AC G.1	UTR only	1.06E-05
ENST00000396761.2.uORF_TTG .3	23.91131874	TTG	chr2	-	220094385	220092746	<i>ATG9A</i>	-	CDSpartial	0.00087758
ENST00000288828.4.uORF_GT G.2	23.89169126	GTG	chr7	+	5229871	5229984	<i>WIP12</i>	ENST00000401525.3.uORF_GTG.2	UTR only	0.00012783
ENST00000359933.4.uORF_CT G.16	23.88930507	CTG	chr14	-	96829514	96829452	<i>ATG2B</i>	-	UTR only	0.9026072
ENST00000359933.4.uORF_AC G.2	23.86795292	ACG	chr14	-	96830064	96829405	<i>ATG2B</i>	-	UTR only	0.00087758
ENST00000268607.5.uORF_AT G.3	23.84102887	ATG	chr16	+	87425745	87425879	<i>MAP1LC3 B</i>	-	UTR only	0.8038648
ENST00000359933.4.uORF_TTG .2	23.83503217	TTG	chr14	-	96829562	96829452	<i>ATG2B</i>	-	UTR only	0.00198221
ENST00000359933.4.uORF_CT G.4	23.82809083	CTG	chr14	-	96830017	96829652	<i>ATG2B</i>	-	UTR only	0.00087758
ENST00000359933.4.uORF_TTG .1	23.73905193	TTG	chr14	-	96829582	96829223	<i>ATG2B</i>	-	CDSpartial	0.00087758
ENST00000359933.4.uORF_CT G.15	23.72360951	CTG	chr14	-	96829534	96829223	<i>ATG2B</i>	-	CDSpartial	0.00087758
ENST00000359933.4.uORF_TTG .3	23.72097856	TTG	chr14	-	96829507	96829223	<i>ATG2B</i>	-	CDSpartial	0.00087758
ENST00000359933.4.uORF_ATT .1	23.63737148	ATT	chr14	-	96829645	96829223	<i>ATG2B</i>	-	CDSpartial	0.00028977
ENST00000359933.4.uORF_GT G.5	23.6308338	GTG	chr14	-	96829753	96829652	<i>ATG2B</i>	-	UTR only	0.00028977

ENST00000359933.4.uORF_CT G.2	23.61499035	CTG	chr14	-	96830049	96829405	ATG2B	-	UTR only	0.00087758
ENST00000396761.2.uORF_GT G.3	23.40238303	GTG	chr2	-	220094366	220094337	ATG9A	ENST00000361242.4.uORF_GTG.2	UTR only	0.00028977
ENST00000359933.4.uORF_AC G.5	23.40151961	ACG	chr14	-	96829668	96829405	ATG2B	-	UTR only	0.00087758
ENST00000359933.4.uORF_GT G.8	23.40100879	GTG	chr14	-	96829627	96829223	ATG2B	-	CDSpartial	0.00028977
ENST00000359933.4.uORF_GT G.2	23.3581883	GTG	chr14	-	96830145	96829405	ATG2B	-	UTR only	0.00087758
ENST00000396761.2.uORF_CT G.2	23.34372948	CTG	chr2	-	220094376	220092746	ATG9A	-	CDSpartial	0.00087758
ENST00000359933.4.uORF_GT G.9	23.3086873	GTG	chr14	-	96829621	96829223	ATG2B	-	CDSpartial	0.00028977
ENST00000524625.1.uORF_AT C.1	23.28881428	ATC	chr11	+	46639311	46651638	ATG13	ENST00000578626.1.uORF_ATC.1.ENST00000312040.4.uORF_ATC.5.ENST00000577256.1.uORF_ATC.1	UTR only	0.00031291
ENST00000359933.4.uORF_AC G.4	23.28662789	ACG	chr14	-	96829697	96829452	ATG2B	-	UTR only	0.00087758
ENST00000268607.5.uORF_CT G.6	23.27577349	CTG	chr16	+	87425584	87425898	MAP1LC3 B	-	UTR only	0.00087758
ENST00000359933.4.uORF_AT G.1	23.27311603	ATG	chr14	-	96830194	96830117	ATG2B	-	UTR only	0.00035863
ENST00000268607.5.uORF_GT G.3	23.24953404	GTG	chr16	+	87425586	87425879	MAP1LC3 B	-	UTR only	0.00087758
ENST00000359933.4.uORF_CT G.14	23.21163101	CTG	chr14	-	96829539	96829405	ATG2B	-	UTR only	0.00087758
ENST00000396761.2.uORF_GT G.1	23.1770432	GTG	chr2	-	220094407	220094363	ATG9A	-	UTR only	0.00010328
ENST00000268607.5.uORF_AT G.2	23.17482902	ATG	chr16	+	87425535	87425879	MAP1LC3 B	-	UTR only	0.00087758
ENST00000359933.4.uORF_AC G.3	23.11861109	ACG	chr14	-	96829983	96829405	ATG2B	-	UTR only	0.00028977
ENST00000268607.5.uORF_CT G.8	23.10903706	CTG	chr16	+	87425716	87425898	MAP1LC3 B	-	UTR only	0.00087758
ENST00000268607.5.uORF_AT C.1	23.096013	ATC	chr16	+	87425616	87425879	MAP1LC3 B	-	UTR only	0.00087758
ENST00000268607.5.uORF_CT G.14	23.0848418	CTG	chr16	+	87425860	87425898	MAP1LC3 B	-	UTR only	0.00198221
ENST00000396761.2.uORF_GT G.2	23.04632711	GTG	chr2	-	220094392	220094363	ATG9A	ENST00000361242.4.uORF_GTG.1	UTR only	0.00010328
ENST00000268607.5.uORF_CT G.13	23.03191105	CTG	chr16	+	87425817	87425879	MAP1LC3 B	-	UTR only	0.9026072

ENST00000359933.4.uORF_CT G.10	23.02009661	CTG	chr14	-	96829775	96829698	ATG2B	-	UTR only	0.00087758
ENST00000268607.5.uORF_AC G.3	23.01467411	ACG	chr16	+	87425733	87425879	MAP1LC3 B	-	UTR only	0.8038648
ENST00000359933.4.uORF_CT G.5	22.96792262	CTG	chr14	-	96829986	96829405	ATG2B	-	UTR only	0.00087758
ENST00000268607.5.uORF_GT G.5	22.93611428	GTG	chr16	+	87425713	87425898	MAP1LC3 B	-	UTR only	0.00028977
ENST00000268607.5.uORF_CT G.10	22.88986361	CTG	chr16	+	87425788	87425898	MAP1LC3 B	-	UTR only	0.00087758
ENST00000524625.1.uORF_CT G.7	22.87639788	CTG	chr11	+	46639331	46651634	ATG13	ENST00000578626.1.uORF_CTG.7,ENST00000312040.4.uORF_CTG.12	UTR only	0.00087758
ENST00000524625.1.uORF_GT G.3	22.87302942	GTG	chr11	+	46639229	46651634	ATG13	ENST00000312040.4.uORF_GT.5,ENST00000578626.1.uORF_GTG.3	UTR only	0.00028977
ENST00000268607.5.uORF_CT G.11	22.86249501	CTG	chr16	+	87425804	87425914	MAP1LC3 B	-	UTR only	0.00087758
ENST00000268607.5.uORF_GT G.2	22.84703769	GTG	chr16	+	87425565	87425879	MAP1LC3 B	-	UTR only	0.00087758
ENST00000359933.4.uORF_CT G.8	22.84159203	CTG	chr14	-	96829864	96829652	ATG2B	-	UTR only	0.00087758
ENST00000435644.2.uORF_CT G.3	22.83844066	CTG	chr8	-	53626897	53626748	RB1CC1	ENST00000025008.5.uORF_CTG.3,ENST00000518710.1.uORF_CTG.3,ENST00000517963.1.uORF_CTG.3,ENST00000518211.1.uORF_CTG.3	UTR only	0.00087758
ENST00000359933.4.uORF_AT A.1	22.8249385	ATA	chr14	-	96829434	96829405	ATG2B	-	UTR only	0.00070728
ENST00000359933.4.uORF_CT G.7	22.82244591	CTG	chr14	-	96829905	96829405	ATG2B	-	UTR only	0.00087758
ENST00000268607.5.uORF_CT G.9	22.82026217	CTG	chr16	+	87425726	87425914	MAP1LC3 B	-	UTR only	0.00087758
ENST00000268607.5.uORF_GT G.4	22.78492635	GTG	chr16	+	87425664	87425879	MAP1LC3 B	-	UTR only	0.00087758
ENST00000359933.4.uORF_GT G.10	22.74310522	GTG	chr14	-	96829480	96829223	ATG2B	-	CDSpartial	0.00028977
ENST00000268607.5.uORF_CT G.7	22.72472412	CTG	chr16	+	87425611	87425898	MAP1LC3 B	-	UTR only	0.00087758
ENST00000268607.5.uORF_AT C.2	22.72115787	ATC	chr16	+	87425769	87425879	MAP1LC3 B	-	UTR only	0.5935874
ENST00000435644.2.uORF_AC G.1	22.68838573	ACG	chr8	-	53626771	53626748	RB1CC1	ENST00000517963.1.uORF_ACG.2,ENST00000025008.5.uORF_ACG.1,ENST00000518710.1.uORF_ACG.1,ENST00000518211.1.uORF_ACG.2	UTR only	0.5749201
ENST00000359933.4.uORF_CT G.17	22.55376007	CTG	chr14	-	96829455	96829405	ATG2B	-	UTR only	0.00070728

ENST00000524625.1.uORF_GT G.5	22.53624125	GTG	chr11	+	46639305	46651638	ATG13	ENST00000312040.4.uORF_GTG.7,ENST00000578626.1.uORF_GTG.5,ENST00000577256.1.uORF_GTG.5	UTR only	0.00031291
ENST00000268607.5.uORF_AC G.5	22.45663213	ACG	chr16	+	87425801	87425914	MAP1LC3 B	-	UTR only	0.00028977
ENST00000268607.5.uORF_CT G.12	22.4481306	CTG	chr16	+	87425814	87425879	MAP1LC3 B	-	UTR only	0.9026072
ENST00000359933.4.uORF_GT G.3	22.44221049	GTG	chr14	-	96830143	96830117	ATG2B	-	UTR only	0.00028977
ENST00000359933.4.uORF_CT G.1	22.41481504	CTG	chr14	-	96830120	96829983	ATG2B	-	UTR only	0.00087758
ENST00000359933.4.uORF_CT G.6	22.4004717	CTG	chr14	-	96829916	96829698	ATG2B	-	UTR only	0.00087758
ENST00000396761.2.uORF_TTG .2	22.39394444	TTG	chr2	-	220094409	220092746	ATG9A	-	CDSpartial	0.00087758
ENST00000268607.5.uORF_AC G.2	22.39314249	ACG	chr16	+	87425436	87425879	MAP1LC3 B	-	UTR only	0.00087758
ENST00000359933.4.uORF_GT G.4	22.38983775	GTG	chr14	-	96829848	96829405	ATG2B	-	UTR only	0.00028977
ENST00000396761.2.uORF_CT G.1	22.38850793	CTG	chr2	-	220094429	220094337	ATG9A	-	UTR only	0.00012783
ENST00000435644.2.uORF_CT G.5	22.3856927	CTG	chr8	-	53626845	53599520	RB1CC1	ENST00000518710.1.uORF_CTG.5,ENST00000518211.1.uORF_CTG.5,ENST00000025008.5.uORF_CTG.5	UTR only	0.00087758
ENST00000268607.5.uORF_TTG .1	22.34763223	TTG	chr16	+	87425528	87425914	MAP1LC3 B	-	UTR only	0.00087758
ENST00000268607.5.uORF_AT G.1	22.34522122	ATG	chr16	+	87425518	87425550	MAP1LC3 B	-	UTR only	0.00198221
ENST00000359933.4.uORF_CT G.3	22.26916413	CTG	chr14	-	96830042	96829983	ATG2B	-	UTR only	0.00012783
ENST00000268607.5.uORF_AC G.4	22.25403876	ACG	chr16	+	87425776	87425898	MAP1LC3 B	-	UTR only	0.00028977
ENST00000359933.4.uORF_GT G.7	22.21750215	GTG	chr14	-	96829701	96829405	ATG2B	-	UTR only	0.00087758
ENST00000524625.1.uORF_TTG .1	22.19534253	TTG	chr11	+	46639422	46651638	ATG13	ENST00000577256.1.uORF_TTG.1,ENST00000578626.1.uORF_TTG.1,ENST00000312040.4.uORF_TTG.5	UTR only	0.00031291
ENST00000395544.4.uORF_AT G.3	22.14916709	ATG	chr17	-	19770873	19770787	ULK2	ENST00000361658.2.uORF_ATG.3	UTR only	0.00087758
ENST00000524625.1.uORF_AC G.2	22.1401715	ACG	chr11	+	46639227	46639256	ATG13	ENST00000312040.4.uORF_AC G.5,ENST00000577256.1.uORF_AC G.2,ENST00000434074.1.uORF_AC G.5,ENST00000580238.1.uORF_AC G.2,ENST00000533325.1.uORF_AC G.2,ENST00000526508.1.uORF_AC G.2,ENST00000528494.1.uORF_AC G.1,ENST00000359513.4.uORF_AC G.1,ENST00000530500.1.uORF_AC G.2,ENST00000451945.1.uORF	UTR only	0.00028977

								_ACG.5.ENST0000058141 6.1.uORF_ACG.2.ENST000 00578626.1.uORF_ACG.2, ENST00000582547.1.uORF _ACG.2.ENST0000058324 9.1.uORF_ACG.2.ENST000 00581438.1.uORF_ACG.2, ENST00000529655.1.uORF _ACG.2		
ENST0000 0396761.2. uORF_CT G.4	22.13644708	CTG	chr2	-	220094285	220092733	ATG9A	ENST00000412355.1.uORF _CTG.1.ENST00000428226 .1.uORF_CTG.1	CDSpartial	0.00087758
ENST0000 0268607.5. uORF_CT G.4	22.09871524	CTG	chr16	+	87425504	87425914	MAP1LC3 B	-	UTR only	0.00087758
ENST0000 0268607.5. uORF_CT G.16	22.08037319	CTG	chr16	+	87425904	87435806	MAP1LC3 B	-	CDSpartial	0.00087758
ENST0000 0268607.5. uORF_GT G.6	22.05841618	GTG	chr16	+	87425808	87425879	MAP1LC3 B	-	UTR only	0.8038648
ENST0000 0359933.4. uORF_CT G.13	22.02598084	CTG	chr14	-	96829605	96829405	ATG2B	-	UTR only	0.00087758
ENST0000 0395544.4. uORF_AT G.2	21.97928952	ATG	chr17	-	19770955	19770923	ULK2	ENST00000361658.2.uORF _ATG.2	UTR only	0.00198221
ENST0000 0359933.4. uORF_AT C.1	21.95390449	ATC	chr14	-	96829997	96829983	ATG2B	-	UTR only	4.22E-05
ENST0000 0268607.5. uORF_CT G.5	21.90600581	CTG	chr16	+	87425547	87425879	MAP1LC3 B	-	UTR only	0.00087758
ENST0000 0268607.5. uORF_AC G.6	21.89179004	ACG	chr16	+	87425829	87425879	MAP1LC3 B	-	UTR only	0.9026072
ENST0000 0268607.5. uORF_CT G.1	21.83327814	CTG	chr16	+	87425423	87425914	MAP1LC3 B	-	UTR only	0.00028977
ENST0000 0268607.5. uORF_CT G.3	21.81703078	CTG	chr16	+	87425451	87425879	MAP1LC3 B	-	UTR only	0.00087758
ENST0000 0395544.4. uORF_AT G.1	21.80779001	ATG	chr17	-	19771093	19771031	ULK2	ENST00000361658.2.uORF _ATG.1	UTR only	0.00087758
ENST0000 0359933.4. uORF_GT G.1	21.67267294	GTG	chr14	-	96830206	96830117	ATG2B	-	UTR only	0.00035863
ENST0000 0268607.5. uORF_AC G.7	21.64139548	ACG	chr16	+	87425879	87425914	MAP1LC3 B	-	UTR only	0.00028977
ENST0000 0268607.5. uORF_GT G.7	21.5912967	GTG	chr16	+	87425876	87425914	MAP1LC3 B	-	UTR only	0.00028977
ENST0000 0268607.5. uORF_AT A.1	21.52694395	ATA	chr16	+	87425919	87435806	MAP1LC3 B	-	CDSpartial	0.00011838
ENST0000 0359933.4. uORF_CT G.12	21.49477984	CTG	chr14	-	96829617	96829405	ATG2B	-	UTR only	0.00087758
ENST0000 0268607.5. uORF_CT G.15	21.43722338	CTG	chr16	+	87425895	87435806	MAP1LC3 B	-	CDSpartial	0.00087758
ENST0000 0524625.1. uORF_AT C.2	21.43346864	ATC	chr11	+	46651596	46651634	ATG13	ENST00000581416.1.uORF _ATC.5.ENST00000578626 .1.uORF_ATC.2.ENST0000 0312040.4.uORF_ATC.6.E	UTR only	0.00010328

								NST00000533325.1.uORF ATC.4.ENST00000577256. 1.uORF_ATC.4		
ENST0000 0395544.4. uORF_CT G.6	21.40890177	CTG	chr17	-	19770920	19770870	<i>ULK2</i>	ENST00000361658.2.uORF _CTG.6	UTR only	0.00198221
ENST0000 0395544.4. uORF_CT G.9	21.37374192	CTG	chr17	-	19770822	19770787	<i>ULK2</i>	ENST00000361658.2.uORF _CTG.9	UTR only	0.00198221
ENST0000 0409033.3. uORF_CT G.1	21.36302505	CTG	chr2	-	220094285	220092746	<i>ATG9A</i>	ENST00000456708.1.uORF _CTG.1.ENST00000455079 .1.uORF_CTG.1.ENST0000 0361242.4.uORF_CTG.3.E NST00000457841.1.uORF_ CTG.1	CDSpartial	0.00028901
ENST0000 0268607.5. uORF_AC G.1	21.32654641	ACG	chr16	+	87425406	87425879	<i>MAP1LC3 B</i>	-	UTR only	0.00087758
ENST0000 0377264.3. uORF_CT G.1	21.24221707	CTG	chr11	-	64684720	64684571	<i>ATG2A</i>	ENST00000421419.2.uORF _CTG.1	CDSpartial	0.00087758
ENST0000 0268607.5. uORF_ATT .1	21.09594956	ATT	chr16	+	87425526	87425879	<i>MAP1LC3 B</i>	-	UTR only	0.00087758
ENST0000 0268607.5. uORF_CT G.2	21.07244804	CTG	chr16	+	87425446	87425550	<i>MAP1LC3 B</i>	-	UTR only	0.00198221
ENST0000 0395544.4. uORF_CT G.1	21.0380922	CTG	chr17	-	19771099	19771031	<i>ULK2</i>	ENST00000361658.2.uORF _CTG.1	UTR only	0.00198221
ENST0000 0274459.4. uORF_GT G.2	20.85044294	GTG	chr5	-	115177508	115177422	<i>ATG12</i>	ENST00000509910.1.uORF _GTG.2.ENST00000379594 .3.uORF_GTG.2.ENST0000 0513322.1.uORF_GTG.2	UTR only	0.00012783
ENST0000 0283290.5. uORF_CT G.4	20.69082938	CTG	chr3	-	112280599	112280444	<i>ATG3</i>	ENST00000402314.2.uORF _CTG.4	UTR only	0.00087758
ENST0000 0274459.4. uORF_CT G.1	20.64707199	CTG	chr5	-	115177515	115177387	<i>ATG12</i>	ENST00000509910.1.uORF _CTG.1.ENST00000513322 .1.uORF_CTG.1.ENST0000 0379594.3.uORF_CTG.1	CDSpartial	0.00087758
ENST0000 0395544.4. uORF_CT G.8	20.61076435	CTG	chr17	-	19770843	19770787	<i>ULK2</i>	ENST00000361658.2.uORF _CTG.8	UTR only	0.00087758
ENST0000 0404914.3. uORF_TTG 2	20.60000311	TTG	chr2	+	242577075	242590458	<i>ATG4B</i>	ENST00000402096.1.uORF _TTG.2.ENST00000400772 .2.uORF_TTG.2.ENST0000 0405546.3.uORF_TTG.2	CDSpartial	0.00087758
ENST0000 0435644.2. uORF_CT G.7	20.5566015	CTG	chr8	-	53626720	53599458	<i>RB1CC1</i>	ENST00000518211.1.uORF _CTG.7.ENST0000025008 .5.uORF_CTG.7.ENST0000 0518710.1.uORF_CTG.7	UTR only	0.00012783
ENST0000 0283290.5. uORF_AC G.2	20.53849477	ACG	chr3	-	112280776	112280762	<i>ATG3</i>	ENST00000492886.1.uORF _ACG.5	UTR only	0.00028977
ENST0000 0395544.4. uORF_AC G.4	20.49401795	ACG	chr17	-	19770825	19770787	<i>ULK2</i>	ENST00000361658.2.uORF _ACG.4	UTR only	0.00028977
ENST0000 0274459.4. uORF_AC G.1	20.44346611	ACG	chr5	-	115177484	115177422	<i>ATG12</i>	ENST00000509910.1.uORF _ACG.1.ENST0000051332 2.1.uORF_ACG.1.ENST000 00379594.3.uORF_ACG.1	UTR only	0.00035863
ENST0000 0283290.5. uORF_CT G.2	20.38274372	CTG	chr3	-	112280631	112280476	<i>ATG3</i>	ENST00000402314.2.uORF _CTG.2	UTR only	0.00087758
ENST0000 0283290.5. uORF_GT G.7	20.21231328	GTG	chr3	-	112280688	112280476	<i>ATG3</i>	ENST00000402314.2.uORF _GTG.3	UTR only	0.00028977
ENST0000 0283290.5. uORF_CT G.6	20.15379502	CTG	chr3	-	112280559	112280476	<i>ATG3</i>	ENST00000402314.2.uORF _CTG.6	UTR only	0.00087758



ENST00000395544.4.uORF_CT G.12	20.05793489	CTG	chr17	-	19770773	19770714	<i>ULK2</i>	ENST00000361658.2.uORF_CT G.12	CDSpartial	0.00087758
ENST00000395544.4.uORF_CT G.2	20.02733777	CTG	chr17	-	19771071	19770952	<i>ULK2</i>	ENST00000361658.2.uORF_CT G.2	UTR only	0.00087758
ENST00000369076.3.uORF_GT G.3	19.95072728	GTG	chr6	-	106773595	106764127	<i>ATG5</i>	ENST00000369070.1.uORF_GT G.3	UTR only	0.00028977
ENST00000395544.4.uORF_GT G.2	19.93364542	GTG	chr17	-	19771057	19771031	<i>ULK2</i>	ENST00000361658.2.uORF_GT G.2	UTR only	0.00028977
ENST00000283290.5.uORF_CT G.5	19.92903567	CTG	chr3	-	112280595	112280476	<i>ATG3</i>	ENST00000402314.2.uORF_CT G.5	UTR only	0.00087758
ENST00000283290.5.uORF_GT G.3	19.87577402	GTG	chr3	-	112280790	112280476	<i>ATG3</i>	-	UTR only	0.00011838
ENST00000382384.2.uORF_CT G.2	19.87305743	CTG	chr7	+	5229992	5230054	<i>WIP12</i>	ENST00000404704.3.uORF_CT G.3,ENST00000401525.3.uORF_CT G.3,ENST00000288828.4.uORF_CT G.3	CDSpartial	0.00087758
ENST00000262039.4.uORF_AT G.1	19.84156171	ATG	chr18	+	39535199	39535291	<i>PIK3C3</i>	-	CDSpartial	0.00087758
ENST00000369076.3.uORF_TTG .3	19.72040777	TTG	chr6	-	106773624	106773412	<i>ATG5</i>	ENST00000369070.1.uORF_TTG.3	UTR only	0.00035863
ENST00000268607.5.uORF_GT G.1	19.71676487	GTG	chr16	+	87425470	87425550	<i>MAP1LC3 B</i>	-	UTR only	0.00087758
ENST00000274459.4.uORF_TTG .2	19.62694884	TTG	chr5	-	115177433	115177422	<i>ATG12</i>	ENST00000509910.1.uORF_TTG.2,ENST00000513322.1.uORF_TTG.2,ENST00000379594.3.uORF_TTG.2	UTR only	0.00198221
ENST00000369076.3.uORF_CT G.6	19.55879596	CTG	chr6	-	106773528	106773412	<i>ATG5</i>	ENST00000360666.4.uORF_CT G.1,ENST00000369070.1.uORF_CT G.6	UTR only	0.00035863
ENST00000283290.5.uORF_GT G.14	19.47127638	GTG	chr3	-	112280466	112280359	<i>ATG3</i>	ENST00000496423.1.uORF_CT G.3,ENST00000402314.2.uORF_CT G.10	CDSpartial	0.00010328
ENST00000369076.3.uORF_CT G.4	19.40736701	CTG	chr6	-	106773549	106773412	<i>ATG5</i>	ENST00000369070.1.uORF_CT G.4	UTR only	0.00087758
ENST00000369076.3.uORF_ATT .1	19.40648574	ATT	chr6	-	106773620	106773402	<i>ATG5</i>	ENST00000369070.1.uORF_ATT.1	UTR only	0.00010328
ENST00000268607.5.uORF_AT C.4	19.3733367	ATC	chr16	+	87426023	87432432	<i>MAP1LC3 B</i>	ENST00000570189.1.uORF_AT C.2,ENST00000565788.1.uORF_AT C.1	CDSpartial	4.22E-05
ENST00000435644.2.uORF_CT G.14	19.37154001	CTG	chr8	-	53598077	53598036	<i>RB1CC1</i>	ENST00000518468.1.uORF_CT G.8,ENST0000025008.5.uORF_CT G.14	UTR only	0.00081058
ENST00000356763.3.uORF_CT G.4	19.35668472	CTG	chr3	-	130465595	130465389	<i>PIK3R4</i>	-	UTR only	0.00031291
ENST00000577035.1.uORF_AT G.1	19.3118955	ATG	chr17	-	7145107	7145093	<i>GABARAP</i>	ENST00000571253.1.uORF_AT G.8	UTR only	0.00198221
ENST00000283290.5.uORF_CT G.9	19.28129556	CTG	chr3	-	112280479	112280444	<i>ATG3</i>	ENST00000402314.2.uORF_CT G.9,ENST00000496423.1.uORF_CT G.2	UTR only	0.00070728
ENST00000573928.1.uORF_CT G.1	19.25295933	CTG	chr17	-	7145747	7145646	<i>GABARAP</i>	ENST00000302386.5.uORF_CT G.3	CDSpartial	0.00087758

ENST00000262039.4.uORF_TTG.2	19.24072777	TTG	chr18	+	39535202	39535291	<i>PIK3C3</i>	-	CDSpartial	0.00087758
ENST00000382384.2.uORF_GT.G.2	19.16290734	GTG	chr7	+	5229940	5229984	<i>WIP12</i>	ENST00000404704.3.uORF_GTG.2.ENST00000401525.3.uORF_GTG.4.ENST00000288828.4.uORF_GTG.4	UTR only	0.5749201
ENST00000262039.4.uORF_AC.G.1	19.1525576	ACG	chr18	+	39535249	39537536	<i>PIK3C3</i>	ENST00000586545.1.uORF_AC.G.1	CDSpartial	4.22E-05
ENST00000262039.4.uORF_GT.G.3	19.13857384	GTG	chr18	+	39535234	39537536	<i>PIK3C3</i>	ENST00000586545.1.uORF_GTG.1	CDSpartial	4.22E-05
ENST00000247178.5.uORF_GT.G.1	19.13701322	GTG	chr14	-	55878566	55878381	<i>ATG14</i>	-	CDSpartial	0.00087758
ENST00000382384.2.uORF_TTG.1	19.10972584	TTG	chr7	+	5229922	5229984	<i>WIP12</i>	ENST00000404704.3.uORF_TTG.1.ENST00000401525.3.uORF_TTG.1.ENST00000288828.4.uORF_TTG.1	UTR only	0.5935874
ENST00000262039.4.uORF_GT.G.4	19.1091534	GTG	chr18	+	39535252	39537536	<i>PIK3C3</i>	ENST00000586545.1.uORF_GTG.2	CDSpartial	4.22E-05
ENST00000262039.4.uORF_CT.G.2	19.09517645	CTG	chr18	+	39535211	39535291	<i>PIK3C3</i>	-	CDSpartial	0.00087758
ENST00000369076.3.uORF_AT.A.1	19.05695835	ATA	chr6	-	106773611	106773402	<i>ATG5</i>	ENST00000369070.1.uORF_AT.A.1	UTR only	0.00010328
ENST00000369076.3.uORF_CT.G.2	19.00486386	CTG	chr6	-	106773650	106773402	<i>ATG5</i>	ENST00000369070.1.uORF_CT.G.2	UTR only	0.00031291
ENST00000356136.3.uORF_AT.G.2	18.92323864	ATG	chr11	+	75526261	75526275	<i>UVRAG</i>	-	UTR only	0.00198221
ENST00000435644.2.uORF_AT.A.2	18.86909477	ATA	chr8	-	53598058	53598026	<i>RB1CC1</i>	ENST00000518468.1.uORF_AT.A.5.ENST0000025008.5.uORF_AT.A.3	CDSpartial	4.22E-05
ENST00000283290.5.uORF_GT.G.4	18.86647354	GTG	chr3	-	112280765	112280730	<i>ATG3</i>	ENST00000492886.1.uORF_GTG.6	UTR only	0.00011838
ENST00000435644.2.uORF_AT.C.4	18.82498515	ATC	chr8	-	53598073	53598062	<i>RB1CC1</i>	ENST0000025008.5.uORF_AT.C.4.ENST00000518468.1.uORF_AT.C.5	UTR only	0.00010328
ENST00000283290.5.uORF_AC.G.1	18.77542305	ACG	chr3	-	112280803	112280798	<i>ATG3</i>	ENST00000492886.1.uORF_AC.G.4	UTR only	1.06E-05
ENST00000283290.5.uORF_AT.C.2	18.74596159	ATC	chr3	-	112280412	112280359	<i>ATG3</i>	ENST00000496423.1.uORF_AT.C.1.ENST00000402314.2.uORF_AT.C.2	CDSpartial	0.00010328
ENST00000283290.5.uORF_GT.G.1	18.71003663	GTG	chr3	-	112280808	112280476	<i>ATG3</i>	-	UTR only	0.00011838
ENST00000356763.3.uORF_CT.G.5	18.70778629	CTG	chr3	-	130465587	130465501	<i>PIK3R4</i>	-	UTR only	0.00087758
ENST00000395544.4.uORF_CT.G.11	18.66606084	CTG	chr17	-	19770783	19769123	<i>ULK2</i>	ENST00000361658.2.uORF_CT.G.11	CDSpartial	0.00031291
ENST00000369076.3.uORF_GT.G.1	18.66154744	GTG	chr6	-	106773658	106764127	<i>ATG5</i>	ENST00000369070.1.uORF_GTG.1	UTR only	0.00028977
ENST00000356763.3.uORF_TTG.3	18.42278073	TTG	chr3	-	130465601	130465389	<i>PIK3R4</i>	-	UTR only	0.00031291

ENST0000 0262039.4. uORF_CT G.1	18.42182841	CTG	chr18	+	39535188	39535220	<i>PIK3C3</i>	-		UTR only	0.00198221
ENST0000 0369076.3. uORF_TTG 4	18.41827104	TTG	chr6	-	106773555	106773412	<i>ATG5</i>	ENST00000369070.1.uORF _TTG.4		UTR only	0.00087758
ENST0000 0356136.3. uORF_AT G.3	18.40518141	ATG	chr11	+	75526406	75526456	<i>UVRAG</i>	-		CDSpartial	0.00198221
ENST0000 0356763.3. uORF_CT G.2	18.37771116	CTG	chr3	-	130465628	130465389	<i>PIK3R4</i>	-		UTR only	0.00031291
ENST0000 0247178.5. uORF_CT G.1	18.31038579	CTG	chr14	-	55878562	55864117	<i>ATG14</i>	-		CDSpartial	0.00087758
ENST0000 0356763.3. uORF_GT G.2	18.24265912	GTG	chr3	-	130465609	130465544	<i>PIK3R4</i>	-		UTR only	0.00028977
ENST0000 0577035.1. uORF_AT C.1	18.17245398	ATC	chr17	-	7145103	7144995	<i>GABARAP</i>	-		UTR only	0.00010328
ENST0000 0262039.4. uORF_GT G.2	18.11147743	GTG	chr18	+	39535177	39535233	<i>PIK3C3</i>	-		UTR only	4.22E-05
ENST0000 0262039.4. uORF_GT G.1	18.10134055	GTG	chr18	+	39535172	39535291	<i>PIK3C3</i>	-		CDSpartial	0.00087758
ENST0000 0356136.3. uORF_CT G.1	18.05692118	CTG	chr11	+	75526251	75526259	<i>UVRAG</i>	-		UTR only	7.28E-05
ENST0000 0356763.3. uORF_AT G.3	18.0358489	ATG	chr3	-	130465213	130465199	<i>PIK3R4</i>	-		UTR only	0.00198221
ENST0000 0356136.3. uORF_AC G.1	17.93563733	ACG	chr11	+	75526288	75526338	<i>UVRAG</i>	-		UTR only	0.5749201
ENST0000 0262039.4. uORF_TTG .1	17.90612895	TTG	chr18	+	39535175	39535291	<i>PIK3C3</i>	-		CDSpartial	0.00087758
ENST0000 0356136.3. uORF_AT A.1	17.73175541	ATA	chr11	+	75526259	75526363	<i>UVRAG</i>	-		UTR only	0.00010328
ENST0000 0309469.4. uORF_CT G.6	17.69762956	CTG	chr19	+	10654735	10654770	<i>ATG4D</i>	ENST00000585752.1.uORF _CTG.6.ENST00000588857 .1.uORF_CTG.6.ENST0000 0586417.1.uORF_CTG.7.E NST00000588667.1.uORF_ CTG.3		CDSpartial	0.00198221
ENST0000 0356763.3. uORF_AC G.2	17.68701686	ACG	chr3	-	130465494	130465411	<i>PIK3R4</i>	-		UTR only	0.00028977
ENST0000 0356763.3. uORF_CT G.3	17.67805597	CTG	chr3	-	130465619	130465389	<i>PIK3R4</i>	-		UTR only	0.00031291
ENST0000 0356136.3. uORF_AT G.1	17.6619167	ATG	chr11	+	75526213	75526275	<i>UVRAG</i>	-		UTR only	0.00198221
ENST0000 0356763.3. uORF_CT G.1	17.61966068	CTG	chr3	-	130465634	130465389	<i>PIK3R4</i>	-		UTR only	0.00031291
ENST0000 0369076.3. uORF_AT A.2	17.593977	ATA	chr6	-	106773415	106764127	<i>ATG5</i>	ENST00000369070.1.uORF _ATA.2.ENST00000360666 .4.uORF_ATA.1		UTR only	0.00010328
ENST0000 0392020.4.	17.55406941	CTG	chr2	+	234160394	234160537	<i>ATG16L1</i>	ENST00000347464.5.uORF _CTG.5.ENST00000392018 .1.uORF_CTG.2.ENST0000		CDSpartial	0.00087758

uORF_CT G.2								0444735.1.uORF_CTG.3.E NST0000041968I.1.uORF_ CTG.3.ENST00000392017. 4.uORF_CTG.5.ENST0000 0373525.5.uORF_CTG.3.E NST0000039202I.3.uORF_ CTG.3.ENST00000417017. 1.uORF_CTG.2		
ENST0000 0262039.4. uORF_ATT .1	17.53767605	ATT	chr18	+	39535195	39535233	<i>PIK3C3</i>	-	UTR only	4.22E-05
ENST0000 0356763.3. uORF_AT G.1	17.52941943	ATG	chr3	-	130465477	130465457	<i>PIK3R4</i>	-	UTR only	0.00198221
ENST0000 0309469.4. uORF_CT G.4	17.46153954	CTG	chr19	+	10654647	10654667	<i>ATG4D</i>	ENST00000588857.1.uORF_ CTG.4.ENST00000586417 .1.uORF_CTG.5.ENST0000 0585752.1.uORF_CTG.4.E NST00000588667.1.uORF_ CTG.1	UTR only	0.00198221
ENST0000 0247178.5. uORF_AC G.1	17.44783318	ACG	chr14	-	55878568	55878563	<i>ATG14</i>	-	UTR only	1.06E-05
ENST0000 0356763.3. uORF_CT G.6	17.43486146	CTG	chr3	-	130465452	130465411	<i>PIK3R4</i>	-	UTR only	0.00198221
ENST0000 0356763.3. uORF_GT G.3	17.42822723	GTG	chr3	-	130465550	130465389	<i>PIK3R4</i>	-	UTR only	0.00010328
ENST0000 0356763.3. uORF_GT G.7	17.41019289	GTG	chr3	-	130465409	130465389	<i>PIK3R4</i>	-	UTR only	0.00028977
ENST0000 0356136.3. uORF_TTG .3	17.40995856	TTG	chr11	+	75526433	75526456	<i>UVRAG</i>	-	CDSpartial	0.9026072
ENST0000 0577035.1. uORF_CT G.1	17.396805	CTG	chr17	-	7145134	7145093	<i>GABARAP</i>	ENST00000571253.1.uORF_ CTG.13	UTR only	0.00081058
ENST0000 0309469.4. uORF_CT G.2	17.39075654	CTG	chr19	+	10654627	10654770	<i>ATG4D</i>	ENST00000586417.1.uORF_ CTG.3.ENST00000585752 .1.uORF_CTG.2.ENST0000 0588857.1.uORF_CTG.2	CDSpartial	0.8038648
ENST0000 0356136.3. uORF_TTG .1	17.38264632	TTG	chr11	+	75526246	75526275	<i>UVRAG</i>	-	UTR only	0.00198221
ENST0000 0356136.3. uORF_GT G.5	17.35236752	GTG	chr11	+	75526385	75526456	<i>UVRAG</i>	-	CDSpartial	0.00087758
ENST0000 0577035.1. uORF_GT G.2	17.30558947	GTG	chr17	-	7145125	7145093	<i>GABARAP</i>	ENST00000571253.1.uORF_ GTG.13	UTR only	0.00081058
ENST0000 0577035.1. uORF_GT G.1	17.28932418	GTG	chr17	-	7145137	7145093	<i>GABARAP</i>	ENST00000571253.1.uORF_ GTG.12	UTR only	0.00081058
ENST0000 0356763.3. uORF_AT C.2	17.28374745	ATC	chr3	-	130465511	130465389	<i>PIK3R4</i>	-	UTR only	0.00010328
ENST0000 0356763.3. uORF_AT C.1	17.26938662	ATC	chr3	-	130465565	130465389	<i>PIK3R4</i>	-	UTR only	0.00010328
ENST0000 0356136.3. uORF_GT G.1	17.11527883	GTG	chr11	+	75526237	75526275	<i>UVRAG</i>	-	UTR only	0.00198221
ENST0000 0356763.3. uORF_AC G.1	17.1064488	ACG	chr3	-	130465523	130465389	<i>PIK3R4</i>	-	UTR only	0.00010328
ENST0000 0356763.3.	17.05270698	ACG	chr3	-	130465481	130465389	<i>PIK3R4</i>	-	UTR only	0.00010328

uORF_AC G.3										
ENST0000 0277746.6. uORF_GT G.1	17.00122343	GTG	chr10	+	64893074	64911922	<i>NRBF2</i>	-	CDSpartial	0.00031291
ENST0000 0356136.3. uORF_CT G.5	16.89354622	CTG	chr11	+	75526365	75562974	<i>UVRAG</i>	-	CDSpartial	0.00087758
ENST0000 0356763.3. uORF_CT G.7	16.89158985	CTG	chr3	-	130465395	130465339	<i>PIK3R4</i>	-	UTR only	0.00087758
ENST0000 0356763.3. uORF_GT G.8	16.87835529	GTG	chr3	-	130465202	130465191	<i>PIK3R4</i>	-	UTR only	0.00028977
ENST0000 0356136.3. uORF_GT G.4	16.85572423	GTG	chr11	+	75526382	75526456	<i>UVRAG</i>	-	CDSpartial	0.00087758
ENST0000 0356763.3. uORF_GT G.4	16.84969217	GTG	chr3	-	130465547	130465389	<i>PIK3R4</i>	-	UTR only	0.00010328
ENST0000 0356763.3. uORF_TTG 2	16.77169826	TTG	chr3	-	130465637	130465389	<i>PIK3R4</i>	-	UTR only	0.00031291
ENST0000 0277746.6. uORF_CT G.1	16.71159566	CTG	chr10	+	64893107	64911922	<i>NRBF2</i>	-	CDSpartial	0.00031291
ENST0000 0356763.3. uORF_GT G.1	16.56306985	GTG	chr3	-	130465614	130465609	<i>PIK3R4</i>	-	UTR only	1.06E-05
ENST0000 0356763.3. uORF_GT G.5	16.56306985	GTG	chr3	-	130465519	130465514	<i>PIK3R4</i>	-	UTR only	1.06E-05
ENST0000 0356763.3. uORF_CT G.8	16.55729357	CTG	chr3	-	130465392	130465339	<i>PIK3R4</i>	-	UTR only	0.00198221
ENST0000 0356763.3. uORF_GT G.6	16.49794955	GTG	chr3	-	130465425	130465411	<i>PIK3R4</i>	-	UTR only	0.00028977
ENST0000 0356763.3. uORF_AT A.1	16.4668256	ATA	chr3	-	130464103	130464095	<i>PIK3R4</i>	-	UTR only	3.78E-06
ENST0000 0356763.3. uORF_TTG .1	16.45915025	TTG	chr3	-	130465660	130465616	<i>PIK3R4</i>	-	UTR only	0.00198221
ENST0000 0356763.3. uORF_TTG .4	16.40326533	TTG	chr3	-	130465427	130465389	<i>PIK3R4</i>	-	UTR only	0.00198221
ENST0000 0356763.3. uORF_CT G.12	16.40179242	CTG	chr3	-	130465255	130465220	<i>PIK3R4</i>	-	UTR only	0.00081058
ENST0000 0356763.3. uORF_AT C.4	16.34007543	ATC	chr3	-	130465336	130465220	<i>PIK3R4</i>	-	UTR only	0.00011838
ENST0000 0356763.3. uORF_CT G.13	16.17561194	CTG	chr3	-	130465252	130465220	<i>PIK3R4</i>	-	UTR only	0.00081058
ENST0000 0356763.3. uORF_AT C.3	16.15589081	ATC	chr3	-	130465439	130465389	<i>PIK3R4</i>	-	UTR only	0.00010328
ENST0000 0277746.6. uORF_TTG .1	16.14664672	TTG	chr10	+	64893083	64911922	<i>NRBF2</i>	-	CDSpartial	0.00031291
ENST0000 0356136.3.	16.1390966	CTG	chr11	+	75526319	75526363	<i>UVRAG</i>	-	UTR only	0.00198221

uORF_CT G.2										
ENST0000 0356136.3. uORF_CT G.6	16.04373206	CTG	chr11	+	75526443	75562974	<i>UVRAG</i>	-	CDSpartial	0.00087758
ENST0000 0356136.3. uORF_CT G.3	16.016688	CTG	chr11	+	75526323	75526331	<i>UVRAG</i>	-	UTR only	7.28E-05
ENST0000 0356763.3. uORF_CT G.9	16.00916021	CTG	chr3	-	130465342	130465220	<i>PIK3R4</i>	-	UTR only	0.00035863
ENST0000 0356136.3. uORF_GT G.2	15.99907146	GTG	chr11	+	75526338	75562974	<i>UVRAG</i>	-	CDSpartial	0.00028977
ENST0000 0277746.6. uORF_GT G.2	15.95492619	GTG	chr10	+	64893077	64911922	<i>NRBF2</i>	-	CDSpartial	0.00031291
ENST0000 0356763.3. uORF_AT G.2	15.95034797	ATG	chr3	-	130465290	130465270	<i>PIK3R4</i>	-	UTR only	0.00081058
ENST0000 0356136.3. uORF_CT G.4	15.94777107	CTG	chr11	+	75526328	75526363	<i>UVRAG</i>	-	UTR only	0.00198221
ENST0000 0356763.3. uORF_CT G.10	15.94483106	CTG	chr3	-	130465324	130465220	<i>PIK3R4</i>	-	UTR only	0.00035863
ENST0000 0577035.1. uORF_ATT .1	15.91913518	ATT	chr17	-	7145092	7145087	<i>GABARAP</i>	ENST00000571253.1.uORF _ATT.6	UTR only	3.78E-06
ENST0000 0356763.3. uORF_ATT .2	15.91598329	ATT	chr3	-	130464106	130464095	<i>PIK3R4</i>	-	UTR only	0.00010328
ENST0000 0589316.1. uORF_CT G.1	15.83846038	CTG	chr17	-	66453617	66453522	<i>WIPI1</i>	ENST00000546360.1.uORF _CTG.1	CDSpartial	0.00087758
ENST0000 0356763.3. uORF_CT G.14	15.83104813	CTG	chr3	-	130465194	130463989	<i>PIK3R4</i>	-	CDSpartial	0.00035863
ENST0000 0356763.3. uORF_TTG .7	15.76010497	TTG	chr3	-	130464070	130464014	<i>PIK3R4</i>	-	CDSpartial	0.00031291
ENST0000 0589316.1. uORF_GT G.2	15.69587679	GTG	chr17	-	66453609	66449126	<i>WIPI1</i>	-	CDSpartial	0.00028977
ENST0000 0356763.3. uORF_AC G.4	15.51843586	ACG	chr3	-	130465249	130465220	<i>PIK3R4</i>	-	UTR only	0.00011838
ENST0000 0589316.1. uORF_GT G.1	15.40237401	GTG	chr17	-	66453637	66453611	<i>WIPI1</i>	-	UTR only	0.5749201
ENST0000 0356763.3. uORF_CT G.11	15.28551915	CTG	chr3	-	130465296	130465270	<i>PIK3R4</i>	-	UTR only	0.00081058
ENST0000 0356763.3. uORF_AT C.5	15.27095956	ATC	chr3	-	130465301	130465287	<i>PIK3R4</i>	-	UTR only	0.00010328
ENST0000 0401525.3. uORF_GT G.3	15.18996793	GTG	chr7	+	5229933	5229995	<i>WIPI2</i>	ENST00000288828.4.uORF _GTG.3,ENST00000404704 .3.uORF_GTG.1,ENST0000 0382384.2.uORF_GTG.1	UTR only	0.00028977
ENST0000 0356763.3. uORF_TTG .5	15.13267924	TTG	chr3	-	130465204	130465199	<i>PIK3R4</i>	-	UTR only	7.28E-05
ENST0000 0277746.6.	15.04739546	TTG	chr10	+	64893086	64911922	<i>NRBF2</i>	-	CDSpartial	0.00031291

uORF_TTG .2											
ENST0000 0409618.1. uORF_TTG .1	14.97890735	TTG	chr2	-	220094056	220093832	<i>ATG9A</i>	ENST00000432520.1.uORF_TTG.1	UTR only	0.00031291	
ENST0000 0409618.1. uORF_TTG .2	14.91267355	TTG	chr2	-	220094046	220093840	<i>ATG9A</i>	ENST00000443140.1.uORF_TTG.1.ENST00000432520.1.uORF_TTG.2	UTR only	0.00087758	
ENST0000 0401525.3. uORF_CT G.2	14.74149362	CTG	chr7	+	5229981	5229995	<i>WIPI2</i>	ENST00000382384.2.uORF_CTG.1.ENST00000288828.4.uORF_CTG.2.ENST00000404704.3.uORF_CTG.2	UTR only	0.9026072	
ENST0000 0373525.5. uORF_ATT .2	14.72107301	ATT	chr2	+	234160381	234160452	<i>ATG16L1</i>	ENST00000417017.1.uORF_ATT.2.ENST00000419681.1.uORF_ATT.2.ENST00000392018.1.uORF_ATT.2.ENST00000392021.3.uORF_ATT.2.ENST00000347464.5.uORF_ATT.3.ENST00000392017.4.uORF_ATT.3.ENST00000444735.1.uORF_ATT.2.ENST00000392020.4.uORF_ATT.2	UTR only	0.5935874	
ENST0000 0589316.1. uORF_CT G.4	14.43662787	CTG	chr17	-	66453588	66449126	<i>WIPI1</i>	-	CDSpartial	0.00087758	
ENST0000 0409618.1. uORF_CT G.5	14.22534183	CTG	chr2	-	220093971	220093840	<i>ATG9A</i>	ENST00000443140.1.uORF_CTG.4.ENST00000432520.1.uORF_CTG.5	UTR only	0.00087758	
ENST0000 0409618.1. uORF_GT G.3	14.22319716	GTG	chr2	-	220093965	220093840	<i>ATG9A</i>	ENST00000443140.1.uORF_GTG.3.ENST00000432520.1.uORF_GTG.3	UTR only	0.00028977	
ENST0000 0401525.3. uORF_GT G.1	13.99432102	GTG	chr7	+	5229835	5229984	<i>WIPI2</i>	ENST00000288828.4.uORF_GTG.1	UTR only	0.00031291	
ENST0000 0409618.1. uORF_GT G.6	13.86907632	GTG	chr2	-	220093828	220092733	<i>ATG9A</i>	ENST00000436856.1.uORF_GTG.3.ENST00000443140.1.uORF_GTG.6	CDSpartial	0.00028977	
ENST0000 0409618.1. uORF_CT G.11	13.86396792	CTG	chr2	-	220093843	220093832	<i>ATG9A</i>	ENST00000436856.1.uORF_CTG.6.ENST00000443140.1.uORF_CTG.10.ENST00000432520.1.uORF_CTG.11	UTR only	0.00198221	
ENST0000 0409618.1. uORF_AC G.2	13.72067645	ACG	chr2	-	220093860	220093840	<i>ATG9A</i>	ENST00000443140.1.uORF_AC.2.ENST00000436856.1.uORF_AC.1.ENST00000432520.1.uORF_AC.2	UTR only	0.00028977	
ENST0000 0409618.1. uORF_CT G.9	13.53254647	CTG	chr2	-	220093890	220093840	<i>ATG9A</i>	ENST00000436856.1.uORF_CTG.4.ENST00000432520.1.uORF_CTG.9.ENST00000443140.1.uORF_CTG.8	UTR only	0.00198221	
ENST0000 0409618.1. uORF_CT G.17	13.51687055	CTG	chr2	-	220093187	220092733	<i>ATG9A</i>	ENST00000443140.1.uORF_CTG.14.ENST0000045784.1.1.uORF_CTG.4.ENST00000409033.3.uORF_CTG.5.ENST00000456708.1.uORF_CTG.5.ENST00000361242.4.uORF_CTG.7.ENST00000434939.1.uORF_CTG.10.ENST00000436856.1.uORF_CTG.10.ENST00000455079.1.uORF_CTG.5	CDSpartial	0.00087758	
ENST0000 0409618.1. uORF_CT G.3	13.47719393	CTG	chr2	-	220094024	220093926	<i>ATG9A</i>	ENST00000432520.1.uORF_CTG.3.ENST00000443140.1.uORF_CTG.2	UTR only	0.00035863	
ENST0000 0409618.1. uORF_GT G.5	13.38177065	GTG	chr2	-	220093831	220092733	<i>ATG9A</i>	ENST00000436856.1.uORF_GTG.2.ENST00000443140.1.uORF_GTG.5	CDSpartial	0.00028977	
ENST0000 0409618.1. uORF_GT G.4	13.35139064	GTG	chr2	-	220093835	220093797	<i>ATG9A</i>	ENST00000436856.1.uORF_GTG.1.ENST00000443140.1.uORF_GTG.4.ENST00000432520.1.uORF_GTG.4	UTR only	0.00028977	
ENST0000 0409618.1. uORF_AC G.3	13.26334605	ACG	chr2	-	220093757	220092746	<i>ATG9A</i>	ENST00000443140.1.uORF_AC.3.ENST00000436856.1.uORF_AC.2	CDSpartial	0.00012783	

ENST00000409618.1.uORF_CT G.14	13.10979603	CTG	chr2	-	220093771	220092733	<i>ATG9A</i>	ENST00000443140.1.uORF_CTG.13,ENST00000436856.1.uORF_CTG.9	CDSpartial	0.00087758
ENST00000409618.1.uORF_GT G.2	13.04408058	GTG	chr2	-	220093967	220093926	<i>ATG9A</i>	ENST00000432520.1.uORF_GTG.2,ENST00000443140.1.uORF_GTG.2	UTR only	0.00011838
ENST00000409618.1.uORF_CT G.13	13.03979488	CTG	chr2	-	220093819	220092733	<i>ATG9A</i>	ENST00000436856.1.uORF_CTG.8,ENST00000443140.1.uORF_CTG.12	CDSpartial	0.00087758
ENST00000409618.1.uORF_CT G.6	12.34076587	CTG	chr2	-	220093931	220093926	<i>ATG9A</i>	ENST00000432520.1.uORF_CTG.6,ENST00000443140.1.uORF_CTG.5	UTR only	7.28E-05
ENST00000371120.3.uORF_GT G.5	11.70672367	GTG	chr1	+	63269430	63269480	<i>ATG4C</i>	ENST00000317868.4.uORF_GTG.6,ENST00000371118.1.uORF_GTG.2	CDSpartial	0.00198221
ENST00000402314.2.uORF_GT G.2	11.68319751	GTG	chr3	-	112280692	112280624	<i>ATG3</i>	ENST00000283290.5.uORF_GTG.6	UTR only	0.00028977
ENST00000371120.3.uORF_CT G.3	11.67210865	CTG	chr1	+	63249824	63269406	<i>ATG4C</i>	ENST00000317868.4.uORF_CTG.3	UTR only	0.00012783
ENST00000540647.1.uORF_TTG 2	11.58312842	TTG	chr12	+	132402904	132403185	<i>ULK1</i>	-	CDSpartial	0.00087758
ENST00000371120.3.uORF_CT G.5	11.56968884	CTG	chr1	+	63249854	63269406	<i>ATG4C</i>	ENST00000317868.4.uORF_CTG.5	UTR only	0.00012783
ENST00000540647.1.uORF_GT G.8	11.43343087	GTG	chr12	+	132402964	132403185	<i>ULK1</i>	-	CDSpartial	0.00087758
ENST00000397709.1.uORF_AT C.1	11.42789538	ATC	chr20	+	33146624	33147024	<i>MAP1LC3 A</i>	ENST00000360668.3.uORF_ATC.7	CDSpartial	0.325226
ENST00000371120.3.uORF_AC G.1	11.42076709	ACG	chr1	+	63249835	63269480	<i>ATG4C</i>	ENST00000317868.4.uORF_ACG.1	CDSpartial	0.00087758
ENST00000371120.3.uORF_CT G.4	11.24733091	CTG	chr1	+	63249839	63269406	<i>ATG4C</i>	ENST00000317868.4.uORF_CTG.4	UTR only	0.00012783
ENST00000371120.3.uORF_GT G.4	11.20317934	GTG	chr1	+	63249862	63269480	<i>ATG4C</i>	ENST00000317868.4.uORF_GTG.4	CDSpartial	0.00087758
ENST00000540647.1.uORF_CT G.4	11.19966148	CTG	chr12	+	132402956	132403117	<i>ULK1</i>	-	CDSpartial	0.00087758
ENST00000540647.1.uORF_CT G.3	11.18848547	CTG	chr12	+	132402901	132403185	<i>ULK1</i>	-	CDSpartial	0.00087758
ENST00000371120.3.uORF_GT G.2	11.11404327	GTG	chr1	+	63249845	63269406	<i>ATG4C</i>	ENST00000317868.4.uORF_GTG.2	UTR only	4.22E-05
ENST00000540647.1.uORF_TTG 4	11.0851393	TTG	chr12	+	132402949	132403185	<i>ULK1</i>	-	CDSpartial	0.00087758
ENST00000371120.3.uORF_TTG 1	11.06187149	TTG	chr1	+	63249860	63269406	<i>ATG4C</i>	ENST00000317868.4.uORF_TTG.1	UTR only	0.00028901
ENST00000540647.1.uORF_AT A.2	10.94765342	ATA	chr12	+	132402919	132403185	<i>ULK1</i>	-	CDSpartial	0.00087758
ENST00000402314.2.uORF_CT G.1	10.91246553	CTG	chr3	-	112280647	112280624	<i>ATG3</i>	ENST00000283290.5.uORF_CTG.1	UTR only	0.9026072



ENST00000402314.2.uORF_GT G.1	10.88450794	GTG	chr3	-	112280733	112280476	<i>ATG3</i>	ENST00000283290.5.uORF_GTG.5	UTR only	0.00028977
ENST00000402314.2.uORF_GT G.4	10.8124608	GTG	chr3	-	112280686	112280624	<i>ATG3</i>	ENST00000283290.5.uORF_GTG.8	UTR only	0.00028977
ENST00000371120.3.uORF_GT G.3	10.73488077	GTG	chr1	+	63249847	63269480	<i>ATG4C</i>	ENST00000317868.4.uORF_GTG.3	CDSpartial	0.00087758
ENST00000402314.2.uORF_CT G.11	10.69062782	CTG	chr3	-	112280439	112280359	<i>ATG3</i>	ENST00000283290.5.uORF_CTG.11,ENST00000496423.1.uORF_CTG.4	CDSpartial	0.00031291
ENST00000435510.2.uORF_AT C.1	10.65440135	ATC	chr10	+	64893103	64893207	<i>NRBF2</i>	ENST00000277746.6.uORF_ATC.1	CDSpartial	0.00010328
ENST00000371120.3.uORF_CT G.6	10.57207427	CTG	chr1	+	63249869	63269406	<i>ATG4C</i>	ENST00000317868.4.uORF_CTG.6	UTR only	0.00028901
ENST00000402314.2.uORF_CT G.3	10.50565114	CTG	chr3	-	112280620	112280444	<i>ATG3</i>	ENST00000283290.5.uORF_CTG.3	UTR only	0.00087758
ENST00000025008.5.uORF_TTG .2	10.48909821	TTG	chr8	-	53626833	53599520	<i>RB1CC1</i>	ENST00000518211.1.uORF_TTG.2,ENST00000435644.2.uORF_TTG.2,ENST00000518710.1.uORF_TTG.2	UTR only	0.00087758
ENST00000371120.3.uORF_TTG .2	10.48728638	TTG	chr1	+	63249890	63269406	<i>ATG4C</i>	ENST00000317868.4.uORF_TTG.2	UTR only	0.00028901
ENST00000371120.3.uORF_CT G.7	10.42069765	CTG	chr1	+	63249872	63269406	<i>ATG4C</i>	ENST00000317868.4.uORF_CTG.7	UTR only	0.00028901
ENST00000540647.1.uORF_GT G.7	10.34550255	GTG	chr12	+	132402962	132403117	<i>ULK1</i>	-	CDSpartial	0.00028977
ENST00000540647.1.uORF_GT G.9	10.17678026	GTG	chr12	+	132402974	132403117	<i>ULK1</i>	-	CDSpartial	0.00028977
ENST00000402314.2.uORF_AT G.1	10.15854629	ATG	chr3	-	112280476	112280444	<i>ATG3</i>	ENST00000283290.5.uORF_ATG.1,ENST00000496423.1.uORF_ATG.1	UTR only	0.00070728
ENST00000540647.1.uORF_GT G.5	10.13920879	GTG	chr12	+	132402892	132403185	<i>ULK1</i>	-	CDSpartial	0.00087758
ENST00000402314.2.uORF_CT G.8	10.01273575	CTG	chr3	-	112280493	112280476	<i>ATG3</i>	ENST00000283290.5.uORF_CTG.8,ENST00000496423.1.uORF_CTG.1	UTR only	0.00198221
ENST00000435510.2.uORF_TTG .3	10.00042496	TTG	chr10	+	64893162	64911930	<i>NRBF2</i>	-	CDSpartial	0.00081058
ENST00000402314.2.uORF_GT G.7	9.983679738	GTG	chr3	-	112280557	112280444	<i>ATG3</i>	ENST00000283290.5.uORF_GTG.11	UTR only	0.00087758
ENST00000371120.3.uORF_ATT .1	9.930553417	ATT	chr1	+	63249888	63269398	<i>ATG4C</i>	ENST00000317868.4.uORF_ATT.1	UTR only	0.00010328
ENST00000435510.2.uORF_TTG .2	9.923467858	TTG	chr10	+	64893114	64911930	<i>NRBF2</i>	-	CDSpartial	0.00198221
ENST00000025008.5.uORF_TTG .3	9.765606241	TTG	chr8	-	53626761	53599520	<i>RB1CC1</i>	ENST00000518211.1.uORF_TTG.3,ENST00000518710.1.uORF_TTG.3,ENST00000435644.2.uORF_TTG.3	UTR only	0.00087758
ENST00000402314.2.uORF_GT G.6	9.760204455	GTG	chr3	-	112280590	112280444	<i>ATG3</i>	ENST00000283290.5.uORF_GTG.10	UTR only	0.00087758

ENST00000402314.2.uORF_CT G.7	9.746648467	CTG	chr3	-	112280553	112280476	ATG3	ENST00000283290.5.uORF_CT G.7	UTR only	0.00087758
ENST00000371120.3.uORF_ATT 3	9.626010702	ATT	chr1	+	63269450	63269455	ATG4C	ENST00000317868.4.uORF_ATT.4,ENST00000443289.1.uORF_ATT.2,ENST00000371118.1.uORF_ATT.2	UTR only	3.78E-06
ENST00000540647.1.uORF_CT G.1	9.574717824	CTG	chr12	+	132402887	132402922	ULK1	-	UTR only	0.00070728
ENST00000402314.2.uORF_GT G.8	9.424063908	GTG	chr3	-	112280496	112280476	ATG3	ENST00000496423.1.uORF_GT G.1,ENST00000283290.5.uORF_GT G.12	UTR only	0.00028977
ENST00000540647.1.uORF_ATT 1	9.400306112	ATT	chr12	+	132402911	132402922	ULK1	-	UTR only	0.00010328
ENST00000435510.2.uORF_CT G.2	9.394652399	CTG	chr10	+	64893147	64911930	NRBF2	-	CDSpartial	0.00198221
ENST00000458350.3.uORF_AC G.1	9.29932563	ACG	chr5	+	81267914	81272036	ATG10	-	UTR only	0.00028977
ENST00000526508.1.uORF_CT G.7	9.164376538	CTG	chr11	+	46639331	46639813	ATG13	ENST00000581438.1.uORF_CT G.7,ENST00000533325.1.uORF_CT G.7	UTR only	0.00087758
ENST00000531818.1.uORF_ATT 1	9.09505404	ATT	chr11	+	75690616	75690681	UVRAG	-	UTR only	0.00010328
ENST00000526508.1.uORF_CT G.4	8.942746117	CTG	chr11	+	46639268	46639813	ATG13	ENST00000581438.1.uORF_CT G.4,ENST00000533325.1.uORF_CT G.4	UTR only	0.00087758
ENST00000526508.1.uORF_AT C.1	8.930483394	ATC	chr11	+	46639311	46639826	ATG13	ENST00000581438.1.uORF_AT C.1,ENST00000533325.1.uORF_AT C.1	UTR only	0.00087758
ENST00000540647.1.uORF_TTG 1	8.869673089	TTG	chr12	+	132402866	132402922	ULK1	-	UTR only	0.00031291
ENST00000531818.1.uORF_AT G.2	8.852915943	ATG	chr11	+	75690894	75690962	UVRAG	-	UTR only	0.8038648
ENST00000402314.2.uORF_GT G.9	8.833508047	GTG	chr3	-	112280482	112280444	ATG3	ENST00000496423.1.uORF_GT G.2,ENST00000283290.5.uORF_GT G.13	UTR only	0.00070728
ENST00000531818.1.uORF_GT G.10	8.830557171	GTG	chr11	+	75690834	75690962	UVRAG	-	UTR only	0.00087758
ENST00000343245.3.uORF_AT G.1	8.794436811	ATG	chr6	-	106773277	106773152	ATG5	-	UTR only	0.00087758
ENST00000540647.1.uORF_CT G.2	8.786168058	CTG	chr12	+	132402890	132402922	ULK1	-	UTR only	0.00070728
ENST00000402314.2.uORF_ATT 1	8.781930199	ATT	chr3	-	112280452	112280444	ATG3	ENST00000496423.1.uORF_ATT.1,ENST00000283290.5.uORF_ATT.1	UTR only	3.78E-06
ENST00000458350.3.uORF_GT G.1	8.742723706	GTG	chr5	+	81268019	81272036	ATG10	-	UTR only	0.00028977
ENST00000458350.3.uORF_ATT 1	8.710802554	ATT	chr5	+	81267989	81272036	ATG10	-	UTR only	0.00028977
ENST00000458350.3.uORF_CT G.6	8.647451663	CTG	chr5	+	81267944	81272036	ATG10	-	UTR only	0.00031291

ENST00000531818.1.uORF_GT G.6	8.604031161	GTG	chr11	+	75690785	75690799	<i>UVRAG</i>	-	UTR only	0.00028977
ENST00000343245.3.uORF_GT G.3	8.5851955	GTG	chr6	-	106773246	106764127	<i>ATG5</i>	-	UTR only	0.00011838
ENST00000317868.4.uORF_AC G.1	8.571783477	ACG	chr1	+	63249835	63269480	<i>ATG4C</i>	ENST00000371120.3.uORF_AC G.1	CDSpartial	0.00087758
ENST00000571129.1.uORF_AT G.1	8.521658613	ATG	chr17	-	7145411	7144995	<i>GABARAP</i>	-	UTR only	0.00081058
ENST00000282185.3.uORF_GT G.2	8.479504557	GTG	chr5	+	81267867	81267905	<i>ATG10</i>	ENST00000355178.4.uORF_GT G.2,ENST00000510085.1.uORF_GT G.2	UTR only	0.00028977
ENST00000531818.1.uORF_TTG .1	8.441636331	TTG	chr11	+	75690592	75690681	<i>UVRAG</i>	-	UTR only	0.00031291
ENST00000531818.1.uORF_AT G.1	8.43097077	ATG	chr11	+	75690745	75690783	<i>UVRAG</i>	-	UTR only	0.00081058
ENST00000398870.3.uORF_AC G.1	8.353656771	ACG	chr18	+	39535249	39542470	<i>PIK3C3</i>	-	CDSpartial	0.00012783
ENST00000531818.1.uORF_GT G.1	8.35264928	GTG	chr11	+	75690620	75690799	<i>UVRAG</i>	-	UTR only	0.00010328
ENST00000526508.1.uORF_GT G.8	8.347060256	GTG	chr11	+	46639810	46639830	<i>ATG13</i>	ENST00000581438.1.uORF_GT G.8,ENST00000395549.3.uORF_GT G.2,ENST00000533325.1.uORF_GT G.8	UTR only	0.00028977
ENST00000531818.1.uORF_AT G.3	8.31253336	ATG	chr11	+	75690959	75694444	<i>UVRAG</i>	-	UTR only	0.00035863
ENST00000398870.3.uORF_GT G.2	8.268650818	GTG	chr18	+	39535252	39542470	<i>PIK3C3</i>	-	CDSpartial	0.00012783
ENST00000458350.3.uORF_CT G.7	8.226131057	CTG	chr5	+	81268035	81272067	<i>ATG10</i>	-	UTR only	0.00087758
ENST00000343245.3.uORF_GT G.2	8.224400312	GTG	chr6	-	106773264	106764127	<i>ATG5</i>	-	UTR only	0.00011838
ENST00000317868.4.uORF_CT G.5	8.212327032	CTG	chr1	+	63249854	63269406	<i>ATG4C</i>	ENST00000371120.3.uORF_CT G.5	UTR only	0.00012783
ENST00000571129.1.uORF_GT G.3	8.184141293	GTG	chr17	-	7145402	7144995	<i>GABARAP</i>	-	UTR only	1.06E-05
ENST00000374837.3.uORF_AT G.2	8.175445733	ATG	chr20	+	33137715	33137756	<i>MAP1LC3 A</i>	-	UTR only	0.00198221
ENST00000531818.1.uORF_ATT .3	8.156474184	ATT	chr11	+	75690799	75690957	<i>UVRAG</i>	-	UTR only	0.00011838
ENST00000531818.1.uORF_GT G.7	8.128025199	GTG	chr11	+	75690791	75690799	<i>UVRAG</i>	-	UTR only	1.06E-05
ENST00000398870.3.uORF_GT G.1	8.123800141	GTG	chr18	+	39535234	39542470	<i>PIK3C3</i>	-	CDSpartial	0.00012783
ENST00000458350.3.uORF_AT C.1	8.110051166	ATC	chr5	+	81267986	81272036	<i>ATG10</i>	-	UTR only	0.00010328

ENST0000 0526508.1. uORF_TTG .2	8.109006268	TTG	chr11	+	46639823	46666901	<i>ATG13</i>	-	CDSpartial	0.00012783
ENST0000 0571129.1. uORF_TTG .1	8.079194398	TTG	chr17	-	7145450	7144995	<i>GABARAP</i>	-	UTR only	0.00081058
ENST0000 0526508.1. uORF_GT G.9	8.071286882	GTG	chr11	+	46639816	46639830	<i>ATG13</i>	ENST00000581438.1.uORF _GTG.9.ENST00000395549 .3.uORF_GTG.3.ENST0000 0533325.1.uORF_GTG.9	UTR only	0.00028977
ENST0000 0540647.1. uORF_GT G.3	8.06387307	GTG	chr12	+	132402855	132402869	<i>ULK1</i>	-	UTR only	0.00028977
ENST0000 0531818.1. uORF_GT G.8	8.048130237	GTG	chr11	+	75690808	75690957	<i>UVRAG</i>	-	UTR only	0.00011838
ENST0000 0526508.1. uORF_CT G.11	8.021653968	CTG	chr11	+	46639868	46666901	<i>ATG13</i>	-	CDSpartial	0.00012783
ENST0000 0531818.1. uORF_CT G.1	7.974995247	CTG	chr11	+	75690582	75690662	<i>UVRAG</i>	-	UTR only	0.00035863
ENST0000 0526508.1. uORF_GT G.11	7.96868827	GTG	chr11	+	46639874	46666901	<i>ATG13</i>	-	CDSpartial	4.22E-05
ENST0000 0317868.4. uORF_AT C.1	7.964900944	ATC	chr1	+	63269425	63269433	<i>ATG4C</i>	ENST00000371120.3.uORF _ATC.1.ENST00000371118 .1.uORF_ATC.1	UTR only	1.55E-06
ENST0000 0540647.1. uORF_GT G.6	7.96368611	GTG	chr12	+	132402926	132402931	<i>ULK1</i>	-	UTR only	1.06E-05
ENST0000 0282185.3. uORF_CT G.6	7.937141293	CTG	chr5	+	81267944	81283468	<i>ATG10</i>	ENST00000355178.4.uORF _CTG.6	CDSpartial	0.00012783
ENST0000 0531818.1. uORF_GT G.11	7.92534846	GTG	chr11	+	75690875	75690889	<i>UVRAG</i>	-	UTR only	0.00028977
ENST0000 0025008.5. uORF_GT G.6	7.922465782	GTG	chr8	-	53599422	53598055	<i>RB1CC1</i>	ENST00000435644.2.uORF _GTG.6.ENST00000518468 .1.uORF_GTG.5	UTR only	0.00028977
ENST0000 0317868.4. uORF_TTG .1	7.918468377	TTG	chr1	+	63249860	63269406	<i>ATG4C</i>	ENST00000371120.3.uORF _TTG.1	UTR only	0.00012783
ENST0000 0540647.1. uORF_AT A.1	7.914362681	ATA	chr12	+	132402917	132402922	<i>ULK1</i>	-	UTR only	3.78E-06
ENST0000 0398870.3. uORF_TTG .1	7.910519807	TTG	chr18	+	39535243	39542470	<i>PIK3C3</i>	-	CDSpartial	0.00028901
ENST0000 0531818.1. uORF_AC G.1	7.906285726	ACG	chr11	+	75690916	75690957	<i>UVRAG</i>	-	UTR only	0.00011838
ENST0000 0531818.1. uORF_TTG .7	7.904225497	TTG	chr11	+	75690844	75690957	<i>UVRAG</i>	-	UTR only	0.00035863
ENST0000 0531818.1. uORF_CT G.9	7.899506216	CTG	chr11	+	75690796	75690957	<i>UVRAG</i>	-	UTR only	0.00035863
ENST0000 0531818.1. uORF_TTG .2	7.894295023	TTG	chr11	+	75690617	75690799	<i>UVRAG</i>	-	UTR only	0.00031291
ENST0000 0540647.1. uORF_GT G.1	7.868460005	GTG	chr12	+	132402848	132402922	<i>ULK1</i>	-	UTR only	4.22E-05

ENST00000343245.3.uORF_TTG.1	7.855700932	TTG	chr6	-	106773240	106764127	ATG5	-	UTR only	0.00035863
ENST00000571129.1.uORF_CT.G.5	7.851653359	CTG	chr17	-	7145432	7144995	GABARAP	-	UTR only	0.00081058
ENST00000025008.5.uORF_ATT.2	7.836425815	ATT	chr8	-	53598045	53598004	RB1CC1	ENST00000435644.2.uORF_ATT.2,ENST00000518468.1.uORF_ATT.9	CDSpartial	0.00010328
ENST00000531818.1.uORF_AT.G.4	7.790700575	ATG	chr11	+	75690983	75694444	UVRAG	-	UTR only	0.00035863
ENST00000531818.1.uORF_ATT.4	7.786854074	ATT	chr11	+	75690813	75690962	UVRAG	-	UTR only	0.00087758
ENST00000531818.1.uORF_CT.G.4	7.781819844	CTG	chr11	+	75690670	75690681	UVRAG	-	UTR only	0.00198221
ENST00000317868.4.uORF_GT.G.1	7.774069044	GTG	chr1	+	63249843	63249878	ATG4C	ENST00000371120.3.uORF_GTG.1,ENST00000443289.1.uORF_GTG.1	UTR only	0.00028977
ENST00000282185.3.uORF_TTG.1	7.76686727	TTG	chr5	+	81267928	81268002	ATG10	ENST00000355178.4.uORF_TTG.1,ENST00000458350.3.uORF_TTG.1,ENST00000510085.1.uORF_TTG.1	UTR only	0.00087758
ENST00000531818.1.uORF_GT.G.9	7.755309361	GTG	chr11	+	75690822	75690962	UVRAG	-	UTR only	0.00087758
ENST00000317868.4.uORF_CT.G.4	7.723154055	CTG	chr1	+	63249839	63269406	ATG4C	ENST00000371120.3.uORF_CTG.4	UTR only	0.00012783
ENST00000317868.4.uORF_TTG.3	7.706594414	TTG	chr1	+	63249898	63269480	ATG4C	-	CDSpartial	0.00087758
ENST00000571129.1.uORF_GT.G.1	7.703887934	GTG	chr17	-	7145459	7144995	GABARAP	-	UTR only	0.00035863
ENST00000526508.1.uORF_CT.G.9	7.639935091	CTG	chr11	+	46639820	46666901	ATG13	-	CDSpartial	0.00012783
ENST00000531818.1.uORF_TTG.3	7.61835691	TTG	chr11	+	75690652	75690681	UVRAG	-	UTR only	0.00198221
ENST00000458350.3.uORF_CT.G.3	7.579706972	CTG	chr5	+	81267898	81268002	ATG10	ENST00000355178.4.uORF_CTG.3,ENST00000510085.1.uORF_CTG.3,ENST00000282185.3.uORF_CTG.3	UTR only	0.00087758
ENST00000317868.4.uORF_GT.G.4	7.570047245	GTG	chr1	+	63249862	63269480	ATG4C	ENST00000371120.3.uORF_GTG.4	CDSpartial	0.00087758
ENST00000458350.3.uORF_CT.G.5	7.561409197	CTG	chr5	+	81267924	81272067	ATG10	-	UTR only	0.00087758
ENST00000526508.1.uORF_GT.G.7	7.558651101	GTG	chr11	+	46639424	46639813	ATG13	ENST00000533325.1.uORF_GTG.7,ENST00000581438.1.uORF_GTG.7,ENST00000395549.3.uORF_GTG.1	UTR only	0.00028977
ENST00000372254.3.uORF_AT.C.1	7.555895923	ATC	chrX	+	107334992	107335015	ATG4A	ENST00000345734.3.uORF_ATC.1,ENST00000372232.3.uORF_ATC.1	UTR only	0.00010328
ENST00000531818.1.uORF_AT.C.4	7.527125264	ATC	chr11	+	75690994	75691029	UVRAG	-	UTR only	4.22E-05
ENST00000540647.1.uORF_GT.G.2	7.484042718	GTG	chr12	+	132402851	132402922	ULK1	-	UTR only	4.22E-05

ENST0000 0531818.1. uORF_GT G.12	7.474047758	GTG	chr11	+	75690886	75690957	<i>UVRAG</i>	-	UTR only	0.00011838
ENST0000 0531818.1. uORF_AT A.2	7.473898364	ATA	chr11	+	75690732	75690758	<i>UVRAG</i>	-	UTR only	0.00010328
ENST0000 0531818.1. uORF_GT G.4	7.464836177	GTG	chr11	+	75690698	75690799	<i>UVRAG</i>	-	UTR only	4.22E-05
ENST0000 0531818.1. uORF_CT G.2	7.447890579	CTG	chr11	+	75690600	75690662	<i>UVRAG</i>	-	UTR only	0.00035863
ENST0000 0458350.3. uORF_AC G.2	7.435329228	ACG	chr5	+	81272017	81272067	<i>ATG10</i>	-	UTR only	0.00028977
ENST0000 0317868.4. uORF_GT G.3	7.427029064	GTG	chr1	+	63249847	63269480	<i>ATG4C</i>	ENST00000371120.3.uORF _GTG.3	CDSpartial	0.00087758
ENST0000 0374837.3. uORF_ATT .1	7.426451591	ATT	chr20	+	33134708	33137737	<i>MAPILC3 A</i>	-	UTR only	0.00010328
ENST0000 0347464.5. uORF_CT G.6	7.421030439	CTG	chr2	+	234160408	234160452	<i>ATG16L1</i>	ENST00000373525.5.uORF _CTG.4,ENST00000392018 .1.uORF_CTG.3,ENST0000 0444735.1.uORF_CTG.4,E NST00000392021.3.uORF_ CTG.4,ENST00000392020. 4.uORF_CTG.3,ENST0000 0419681.1.uORF_CTG.4,E NST00000392017.4.uORF_ CTG.6,ENST00000417017. 1.uORF_CTG.3	UTR only	0.00198221
ENST0000 0374837.3. uORF_CT G.6	7.37174649	CTG	chr20	+	33137759	33137785	<i>MAPILC3 A</i>	-	CDSpartial	0.00198221
ENST0000 0571129.1. uORF_GT G.2	7.355279364	GTG	chr17	-	7145456	7144995	<i>GABARAP</i>	-	UTR only	0.00035863
ENST0000 0458350.3. uORF_CT G.8	7.351664317	CTG	chr5	+	81268064	81272036	<i>ATG10</i>	-	UTR only	0.00087758
ENST0000 0458350.3. uORF_CT G.9	7.348431878	CTG	chr5	+	81268092	81272067	<i>ATG10</i>	-	UTR only	0.00087758
ENST0000 0531818.1. uORF_CT G.11	7.342471519	CTG	chr11	+	75690848	75690889	<i>UVRAG</i>	-	UTR only	0.00081058
ENST0000 0374837.3. uORF_TTG .1	7.336105572	TTG	chr20	+	33134711	33137737	<i>MAPILC3 A</i>	-	UTR only	0.00198221
ENST0000 0571129.1. uORF_CT G.6	7.299396488	CTG	chr17	-	7145429	7144995	<i>GABARAP</i>	-	UTR only	0.00081058
ENST0000 0531818.1. uORF_CT G.5	7.277973621	CTG	chr11	+	75690673	75690681	<i>UVRAG</i>	-	UTR only	7.28E-05
ENST0000 0531818.1. uORF_GT G.2	7.272289444	GTG	chr11	+	75690675	75690758	<i>UVRAG</i>	-	UTR only	4.22E-05
ENST0000 0317868.4. uORF_GT G.2	7.267764821	GTG	chr1	+	63249845	63269406	<i>ATG4C</i>	ENST00000371120.3.uORF _GTG.2	UTR only	4.22E-05
ENST0000 0317868.4. uORF_GT G.5	7.249578773	GTG	chr1	+	63249901	63269480	<i>ATG4C</i>	-	CDSpartial	0.00087758
ENST0000 0531818.1.	7.248990161	CTG	chr11	+	75690829	75690957	<i>UVRAG</i>	-	UTR only	0.00035863

uORF_CT G.10										
ENST0000 0531818.1. uORF_GT G.3	7.236511569	GTG	chr11	+	75690684	75690758	<i>UVRAG</i>	-	UTR only	4.22E-05
ENST0000 0531818.1. uORF_ATT 2	7.236471746	ATT	chr11	+	75690779	75690799	<i>UVRAG</i>	-	UTR only	0.00010328
ENST0000 0571129.1. uORF_TTG 2	7.227393269	TTG	chr17	-	7145423	7144995	<i>GABARAP</i>	-	UTR only	0.00081058
ENST0000 0531818.1. uORF_AT C.1	7.224354133	ATC	chr11	+	75690662	75690799	<i>UVRAG</i>	-	UTR only	0.00010328
ENST0000 0531818.1. uORF_TTG .10	7.190711178	TTG	chr11	+	75690909	75690962	<i>UVRAG</i>	-	UTR only	0.9026072
ENST0000 0317868.4. uORF_TTG 2	7.184997473	TTG	chr1	+	63249890	63269406	<i>ATG4C</i>	ENST00000371120.3.uORF _TTG.2	UTR only	0.00012783
ENST0000 0531818.1. uORF_TTG 9	7.150989006	TTG	chr11	+	75690899	75694444	<i>UVRAG</i>	-	UTR only	0.00035863
ENST0000 0282185.3. uORF_CT G.5	7.144898413	CTG	chr5	+	81267924	81283388	<i>ATG10</i>	ENST00000510085.1.uORF _CTG.5.ENST00000355178 .4.uORF_CTG.5	UTR only	0.00031291
ENST0000 0571129.1. uORF_CT G.4	7.1223086	CTG	chr17	-	7145438	7144995	<i>GABARAP</i>	-	UTR only	0.00081058
ENST0000 0531818.1. uORF_TTG .4	7.117376984	TTG	chr11	+	75690659	75690799	<i>UVRAG</i>	-	UTR only	0.00031291
ENST0000 0531818.1. uORF_GT G.5	7.11585323	GTG	chr11	+	75690704	75690799	<i>UVRAG</i>	-	UTR only	4.22E-05
ENST0000 0458350.3. uORF_CT G.4	7.102183056	CTG	chr5	+	81267902	81272036	<i>ATG10</i>	-	UTR only	0.00087758
ENST0000 0343245.3. uORF_CT G.1	7.095317151	CTG	chr6	-	106773216	106764127	<i>ATG5</i>	-	UTR only	0.00035863
ENST0000 0374837.3. uORF_AT G.1	7.093107583	ATG	chr20	+	33134682	33134714	<i>MAP1LC3 A</i>	-	UTR only	0.00081058
ENST0000 0343245.3. uORF_GT G.1	7.089190694	GTG	chr6	-	106773270	106764127	<i>ATG5</i>	-	UTR only	0.00011838
ENST0000 0343245.3. uORF_AC G.1	7.082191667	ACG	chr6	-	106773232	106773152	<i>ATG5</i>	-	UTR only	0.00087758
ENST0000 0526508.1. uORF_CT G.13	7.054621383	CTG	chr11	+	46639894	46639899	<i>ATG13</i>	ENST00000581416.1.uORF _CTG.10.ENST0000058143 8.1.uORF_CTG.13.ENST00 000529655.1.uORF_CTG.1 0.ENST00000577256.1.uO RF_CTG.10.ENST0000039 5549.3.uORF_CTG.6.ENST 00000580238.1.uORF_CTG .10.ENST00000533325.1.u ORF_CTG.13.ENST000005 82547.1.uORF_CTG.10	UTR only	7.28E-05
ENST0000 0458350.3. uORF_GT G.2	7.041331409	GTG	chr5	+	81272030	81272059	<i>ATG10</i>	-	UTR only	0.00028901
ENST0000 0343245.3. uORF_GT G.5	7.040187594	GTG	chr6	-	106773197	106764114	<i>ATG5</i>	-	UTR only	0.00010328

ENST00000531818.1.uORF_TTG.8	6.97966565	TTG	chr11	+	75690873	75690962	<i>UVRAG</i>	-	UTR only	0.00198221
ENST00000531818.1.uORF_CT.G.12	6.949331025	CTG	chr11	+	75690883	75690957	<i>UVRAG</i>	-	UTR only	0.00035863
ENST00000317868.4.uORF_ATT.1	6.939286219	ATT	chr1	+	63249888	63269398	<i>ATG4C</i>	ENST00000371120.3.uORF_ATT.1	UTR only	0.00010328
ENST00000531818.1.uORF_GT.G.13	6.91503502	GTG	chr11	+	75690923	75694444	<i>UVRAG</i>	-	UTR only	0.00035863
ENST00000526508.1.uORF_CT.G.10	6.901495526	CTG	chr11	+	46639857	46639913	<i>ATG13</i>	ENST00000395549.3.uORF_CTG.3,ENST00000581438.1.uORF_CTG.10,ENST00000533325.1.uORF_CTG.10	UTR only	0.00012783
ENST00000531818.1.uORF_ATT.5	6.897448952	ATT	chr11	+	75690976	75691029	<i>UVRAG</i>	-	UTR only	4.22E-05
ENST00000526508.1.uORF_AC.G.6	6.88664209	ACG	chr11	+	46639853	46666901	<i>ATG13</i>	-	CDSpartial	4.22E-05
ENST00000571129.1.uORF_CT.G.1	6.886119585	CTG	chr17	-	7145468	7144995	<i>GABARAP</i>	-	UTR only	0.00081058
ENST00000571129.1.uORF_CT.G.2	6.877621845	CTG	chr17	-	7145465	7144995	<i>GABARAP</i>	-	UTR only	0.00081058
ENST00000317868.4.uORF_CT.G.6	6.875109005	CTG	chr1	+	63249869	63269406	<i>ATG4C</i>	ENST00000371120.3.uORF_CTG.6	UTR only	0.00012783
ENST00000531818.1.uORF_AT.C.2	6.872857009	ATC	chr11	+	75690735	75690758	<i>UVRAG</i>	-	UTR only	0.00010328
ENST00000531818.1.uORF_TTG.6	6.869270668	TTG	chr11	+	75690764	75690799	<i>UVRAG</i>	-	UTR only	0.00028901
ENST00000025008.5.uORF_CT.G.13	6.860225918	CTG	chr8	-	53599418	53598078	<i>RB1CC1</i>	ENST00000435644.2.uORF_CTG.13,ENST00000518468.1.uORF_CTG.7	UTR only	7.28E-05
ENST00000374837.3.uORF_GT.G.1	6.84388263	GTG	chr20	+	33134693	33137737	<i>MAP1LC3A</i>	-	UTR only	0.00010328
ENST00000458350.3.uORF_GT.G.3	6.804676225	GTG	chr5	+	81272064	81272111	<i>ATG10</i>	-	UTR only	4.22E-05
ENST00000531818.1.uORF_CT.G.13	6.795454074	CTG	chr11	+	75690904	75690957	<i>UVRAG</i>	-	UTR only	0.00081058
ENST00000531818.1.uORF_TTG.11	6.781201691	TTG	chr11	+	75690977	75694444	<i>UVRAG</i>	-	UTR only	0.00035863
ENST00000025008.5.uORF_AT.A.4	6.778393709	ATA	chr8	-	53598039	53598004	<i>RB1CC1</i>	ENST00000435644.2.uORF_AT.A.3,ENST00000518468.1.uORF_AT.A.6	CDSpartial	0.00010328
ENST00000531818.1.uORF_AT.C.3	6.742890662	ATC	chr11	+	75690991	75691029	<i>UVRAG</i>	-	UTR only	4.22E-05
ENST00000317868.4.uORF_CT.G.7	6.723732389	CTG	chr1	+	63249872	63269406	<i>ATG4C</i>	ENST00000371120.3.uORF_CTG.7	UTR only	0.00012783
ENST00000531818.1.uORF_GT.G.14	6.696811646	GTG	chr11	+	75690954	75690962	<i>UVRAG</i>	-	UTR only	1.06E-05



ENST00000282185.3.uORF_CT G.4	6.689767626	CTG	chr5	+	81267902	81283468	ATG10	ENST00000355178.4.uORF_CT G.4	CDSpartial	0.00012783
ENST00000531818.1.uORF_AT C.5	6.655906313	ATC	chr11	+	75690998	75694444	UVRAG	-	UTR only	4.22E-05
ENST00000531818.1.uORF_ATT .6	6.638654134	ATT	chr11	+	75691039	75694431	UVRAG	-	UTR only	0.00010328
ENST00000531818.1.uORF_CT G.19	6.637189785	CTG	chr11	+	75691031	75694444	UVRAG	-	UTR only	0.00035863
ENST00000458350.3.uORF_CT G.10	6.610449444	CTG	chr5	+	81268097	81272036	ATG10	-	UTR only	0.00198221
ENST00000374837.3.uORF_TTG .2	6.566019292	TTG	chr20	+	33137727	33137756	MAP1LC3 A	-	UTR only	0.00198221
ENST00000372254.3.uORF_CT G.1	6.535581017	CTG	chrX	+	107334942	107334998	ATG4A	ENST00000372232.3.uORF_CT G.1,ENST00000345734.3.uORF_CT G.1	UTR only	0.00035863
ENST00000458350.3.uORF_CT G.11	6.531288387	CTG	chr5	+	81272056	81272067	ATG10	-	UTR only	0.00198221
ENST00000571129.1.uORF_AT C.1	6.502554121	ATC	chr17	-	7145474	7144995	GABARAP	-	UTR only	0.00012783
ENST00000343245.3.uORF_CT G.6	6.496129808	CTG	chr6	-	106764091	106764080	ATG5	ENST00000369070.1.uORF_CT G.10,ENST00000360666.4.uORF_CT G.5,ENST00000369076.3.uORF_CT G.10	CDSpartial	0.00198221
ENST00000458350.3.uORF_AT C.3	6.49398246	ATC	chr5	+	81272067	81272111	ATG10	-	UTR only	4.22E-05
ENST00000531818.1.uORF_CT G.3	6.476975923	CTG	chr11	+	75690644	75690799	UVRAG	-	UTR only	0.00031291
ENST00000374837.3.uORF_CT G.7	6.445196579	CTG	chr20	+	33137765	33137785	MAP1LC3 A	-	CDSpartial	0.00198221
ENST00000282185.3.uORF_CT G.2	6.431748422	CTG	chr5	+	81267880	81268002	ATG10	ENST00000355178.4.uORF_CT G.2,ENST00000510085.1.uORF_CT G.2,ENST00000458350.3.uORF_CT G.2	UTR only	0.00035863
ENST00000372232.3.uORF_GT G.1	6.415243226	GTG	chrX	+	107334969	107334998	ATG4A	ENST00000372254.3.uORF_CT G.1,ENST00000345734.3.uORF_CT G.1	UTR only	0.00011838
ENST00000458350.3.uORF_CT G.12	6.382110946	CTG	chr5	+	81272094	81272111	ATG10	-	UTR only	0.00198221
ENST00000317868.4.uORF_ATT .2	6.351562516	ATT	chr1	+	63249914	63269406	ATG4C	-	UTR only	4.22E-05
ENST00000347464.5.uORF_CT G.4	6.315416908	CTG	chr2	+	234160391	234160537	ATG16L1	ENST00000392021.3.uORF_CT G.2,ENST00000392018.1.uORF_CT G.1,ENST00000444735.1.uORF_CT G.2,ENST00000373525.5.uORF_CT G.2,ENST00000419681.1.uORF_CT G.2,ENST00000392020.4.uORF_CT G.1,ENST00000392017.4.uORF_CT G.4,ENST00000417017.1.uORF_CT G.1	CDSpartial	0.00087758
ENST00000531818.1.uORF_CT G.7	6.271162401	CTG	chr11	+	75690740	75690799	UVRAG	-	UTR only	0.00012783

ENST0000025008.5.uORF_AT C.3	6.266613263	ATC	chr8	-	53599458	53598055	<i>RB1CC1</i>	ENST00000435644.2.uORF_AT C.3.ENST00000518468.1.uORF_AT C.4	UTR only	4.22E-05
ENST00000317868.4.uORF_CT G.9	6.260701973	CTG	chr1	+	63249908	63269406	<i>ATG4C</i>	-	UTR only	0.00028901
ENST00000343245.3.uORF_CT G.2	6.235275908	CTG	chr6	-	106773192	106764127	<i>ATG5</i>	-	UTR only	0.00035863
ENST00000317868.4.uORF_CT G.1	6.194163836	CTG	chr1	+	63249810	63249815	<i>ATG4C</i>	ENST00000443289.1.uORF_CT G.1.ENST00000371120.3.uORF_CT G.1	UTR only	7.28E-05
ENST00000531818.1.uORF_CT G.15	6.18587166	CTG	chr11	+	75690937	75690957	<i>UVRAG</i>	-	UTR only	0.00081058
ENST00000343245.3.uORF_TTG 2	6.185612425	TTG	chr6	-	106773206	106764114	<i>ATG5</i>	-	UTR only	0.00031291
ENST00000531818.1.uORF_TTG 5	6.100901735	TTG	chr11	+	75690752	75690799	<i>UVRAG</i>	-	UTR only	0.00028901
ENST00000526508.1.uORF_AT A.1	6.099755065	ATA	chr11	+	46639914	46665852	<i>ATG13</i>	ENST00000529655.1.uORF_AT A.1	CDSpartial	0.00010328
ENST00000374837.3.uORF_CT G.3	6.083483771	CTG	chr20	+	33134678	33137737	<i>MAP1LC3 A</i>	-	UTR only	0.00031291
ENST00000343245.3.uORF_AT G.2	6.072020855	ATG	chr6	-	106773169	106773152	<i>ATG5</i>	-	UTR only	0.00198221
ENST00000458350.3.uORF_GT G.4	6.030288038	GTG	chr5	+	81272091	81272111	<i>ATG10</i>	-	UTR only	0.00028977
ENST00000374837.3.uORF_CT G.2	6.018354115	CTG	chr20	+	33134674	33137733	<i>MAP1LC3 A</i>	-	UTR only	0.00035863
ENST00000372232.3.uORF_TTG 1	6.010627025	TTG	chrX	+	107334902	107335015	<i>ATG4A</i>	ENST00000345734.3.uORF_TTG.1	UTR only	0.00087758
ENST00000526508.1.uORF_GT G.13	6.003172305	GTG	chr11	+	46639896	46639913	<i>ATG13</i>	ENST00000533325.1.uORF_GT G.13.ENST0000057725.6.1.uORF_GT G.10.ENST0000580238.1.uORF_GT G.10.ENST00000529655.1.uORF_GT G.10.ENST00000581416.1.uORF_GT G.10.ENS T00000582547.1.uORF_GT G.10.ENST00000395549.3.uORF_GT G.7.ENST00000581438.1.uORF_GT G.13	UTR only	0.00010328
ENST00000343245.3.uORF_CT G.5	5.991564308	CTG	chr6	-	106764103	106764095	<i>ATG5</i>	ENST00000369076.3.uORF_CT G.9.ENST00000360666.4.uORF_CT G.4.ENST00000369070.1.uORF_CT G.9	UTR only	7.28E-05
ENST00000531818.1.uORF_CT G.8	5.97984111	CTG	chr11	+	75690748	75690783	<i>UVRAG</i>	-	UTR only	0.00081058
ENST00000531818.1.uORF_AT A.1	5.960197367	ATA	chr11	+	75690730	75690735	<i>UVRAG</i>	-	UTR only	3.78E-06
ENST00000347464.5.uORF_CT G.8	5.916554866	CTG	chr2	+	234160449	234160472	<i>ATG16L1</i>	ENST00000392018.1.uORF_CT G.5.ENST00000444735.1.uORF_CT G.6.ENST00000392020.4.uORF_CT G.5.ENS T000000419681.1.uORF_CT G.6.ENST00000417017.1.uORF_CT G.5.ENST00000373525.5.uORF_CT G.6.ENS T000000392021.3.uORF	UTR only	0.00081058

								CTG.6.ENST0000392017.4.uORF_CTG.8		
ENST00000531818.1.uORF_CT G.14	5.88970653	CTG	chr11	+	75690928	75690957	<i>UVRAG</i>	-	UTR only	0.00081058
ENST00000374837.3.uORF_CT G.4	5.884456624	CTG	chr20	+	33137730	33137756	<i>MAP1LC3 A</i>	-	UTR only	0.00198221
ENST00000343245.3.uORF_TTG .3	5.8554043	TTG	chr6	-	106773178	106773152	<i>ATG5</i>	-	UTR only	0.00198221
ENST00000343245.3.uORF_CT G.3	5.844452459	CTG	chr6	-	106773165	106764127	<i>ATG5</i>	-	UTR only	0.00081058
ENST00000458350.3.uORF_AT C.2	5.81421024	ATC	chr5	+	81272051	81272059	<i>ATG10</i>	-	UTR only	3.78E-06
ENST00000531818.1.uORF_ATT .7	5.779854843	ATT	chr11	+	75691045	75694431	<i>UVRAG</i>	-	UTR only	0.00010328
ENST00000343245.3.uORF_GT G.4	5.762007342	GTG	chr6	-	106773199	106773152	<i>ATG5</i>	-	UTR only	0.00198221
ENST00000531818.1.uORF_CT G.16	5.718447194	CTG	chr11	+	75691003	75691029	<i>UVRAG</i>	-	UTR only	0.00081058
ENST00000531818.1.uORF_CT G.6	5.684037918	CTG	chr11	+	75690714	75690758	<i>UVRAG</i>	-	UTR only	0.00070728
ENST00000374837.3.uORF_CT G.1	5.657925397	CTG	chr20	+	33134665	33137733	<i>MAP1LC3 A</i>	-	UTR only	0.00035863
ENST00000347464.5.uORF_GT G.2	5.652336585	GTG	chr2	+	234160265	234160312	<i>ATG16L1</i>	ENST00000392017.4.uORF_GTG.2	UTR only	0.00011838
ENST00000347464.5.uORF_CT G.2	5.543028801	CTG	chr2	+	234160248	234160268	<i>ATG16L1</i>	ENST00000392017.4.uORF_CTG.2	UTR only	0.00198221
ENST00000343245.3.uORF_TTG .4	5.532355824	TTG	chr6	-	106773162	106764127	<i>ATG5</i>	-	UTR only	0.00081058
ENST00000360666.4.uORF_GT G.2	5.418819162	GTG	chr6	-	106773502	106764127	<i>ATG5</i>	ENST00000369076.3.uORF_GTG.6,ENST00000369070.1.uORF_GTG.6	UTR only	0.00028977
ENST00000347464.5.uORF_GT G.1	5.374769118	GTG	chr2	+	234160256	234160312	<i>ATG16L1</i>	ENST00000392017.4.uORF_GTG.1	UTR only	0.00011838
ENST00000343245.3.uORF_TTG .7	5.349243056	TTG	chr6	-	106764130	106764122	<i>ATG5</i>	ENST00000369076.3.uORF_TTG.9,ENST00000369070.1.uORF_TTG.9,ENST00000360666.4.uORF_TTG.5	UTR only	2.97E-05
ENST00000531818.1.uORF_CT G.18	5.252049583	CTG	chr11	+	75691024	75691029	<i>UVRAG</i>	-	UTR only	7.28E-05
ENST00000531818.1.uORF_CT G.20	5.004561642	CTG	chr11	+	75691067	75694444	<i>UVRAG</i>	-	UTR only	0.00081058
ENST00000360666.4.uORF_TTG .3	4.826392874	TTG	chr6	-	106764140	106764114	<i>ATG5</i>	ENST00000369070.1.uORF_TTG.7,ENST00000343245.3.uORF_TTG.5,ENST00000369076.3.uORF_TTG.7	UTR only	0.00070728
ENST00000458350.3.uORF_CT G.13	4.654185152	CTG	chr5	+	81272116	81283388	<i>ATG10</i>	-	UTR only	0.00028901
ENST00000458350.3.	4.652590414	CTG	chr5	+	81272127	81272144	<i>ATG10</i>	-	UTR only	0.00198221

uORF_CT G.14											
ENST0000 0360666.4. uORF_TTG .1	4.625595081	TTG	chr6	-	106773486	106773412	ATG5	ENST00000369070.1.uORF _TTG.5.ENST00000369076 .3.uORF_TTG.5	UTR only	0.00035863	
ENST0000 0282185.3. uORF_AT C.2	4.604801993	ATC	chr5	+	81283380	81283388	ATG10	ENST00000513443.1.uORF _ATC.2.ENST00000513634 .1.uORF_ATC.1.ENST0000 0458350.3.uORF_ATC.4.E NST00000504770.1.uORF_ ATC.1.ENST00000510085. 1.uORF_ATC.3.ENST0000 0355178.4.uORF_ATC.2	UTR only	3.78E-06	
ENST0000 0458350.3. uORF_TTG 2	4.541802367	TTG	chr5	+	81272130	81272144	ATG10	-	UTR only	0.00198221	
ENST0000 0360666.4. uORF_AT C.1	4.423875553	ATC	chr6	-	106773458	106773402	ATG5	ENST00000369070.1.uORF _ATC.1.ENST00000369076 .3.uORF_ATC.1	UTR only	0.00010328	
ENST0000 0360666.4. uORF_CT G.3	4.136076832	CTG	chr6	-	106764112	106764095	ATG5	ENST00000369076.3.uORF _CTG.8.ENST00000369070 .1.uORF_CTG.8.ENST0000 0343245.3.uORF_CTG.4	UTR only	0.00198221	
ENST0000 0458350.3. uORF_ATT 3	3.861777206	ATT	chr5	+	81272140	81283388	ATG10	-	UTR only	4.22E-05	
ENST0000 0458350.3. uORF_ATT 4	3.818852181	ATT	chr5	+	81283383	81283388	ATG10	ENST00000513443.1.uORF _ATT.4.ENST00000513634 .1.uORF_ATT.1.ENST0000 0510085.1.uORF_ATT.3.E NST00000504770.1.uORF_ ATT.1.ENST00000282185. 3.uORF_ATT.2.ENST0000 0355178.4.uORF_ATT.2	UTR only	3.78E-06	
ENST0000 0360666.4. uORF_GT G.3	3.668030927	GTG	chr6	-	106773440	106773402	ATG5	ENST00000369076.3.uORF _GTG.7.ENST00000369070 .1.uORF_GTG.7	UTR only	0.00028977	
ENST0000 0568455.1. uORF_AT G.3	3.444626878	ATG	chr16	+	75600579	75600611	GABARAP L2	-	UTR only	0.00198221	
ENST0000 0568455.1. uORF_AT G.1	3.431431314	ATG	chr16	+	75600516	75600611	GABARAP L2	-	UTR only	0.00198221	
ENST0000 0568455.1. uORF_CT G.1	3.059147152	CTG	chr16	+	75600521	75600574	GABARAP L2	-	UTR only	0.9026072	
ENST0000 0568455.1. uORF_AT G.2	2.888471924	ATG	chr16	+	75600543	75600611	GABARAP L2	-	UTR only	0.00198221	
ENST0000 0568455.1. uORF_CT G.4	2.755945365	CTG	chr16	+	75600548	75600574	GABARAP L2	-	UTR only	0.9026072	
ENST0000 0568455.1. uORF_CT G.5	2.443457882	CTG	chr16	+	75600571	75601938	GABARAP L2	-	UTR only	0.00087758	
ENST0000 0588156.1. uORF_CT G.1	2.433656987	CTG	chr18	+	39637814	39637864	PIK3C3	ENST00000587261.1.uORF _CTG.5	UTR only	0.00070728	
ENST0000 0568455.1. uORF_CT G.7	2.329874105	CTG	chr16	+	75600654	75600751	GABARAP L2	-	UTR only	7.28E-05	
ENST0000 0568455.1. uORF_CT G.3	2.286069484	CTG	chr16	+	75600531	75600611	GABARAP L2	-	UTR only	0.00198221	
ENST0000 0369070.1. uORF_GT G.4	2.230553353	GTG	chr6	-	106773562	106764127	ATG5	ENST00000369076.3.uORF _GTG.4	UTR only	0.00028977	
ENST0000 0568455.1.	2.214154243	TTG	chr16	+	75600598	75601938	GABARAP L2	-	UTR only	0.00087758	

uORF_TTG .1											
ENST0000 0568455.1. uORF_CT G.2	2.205203139	CTG	chr16	+	75600524	75600574	<i>GABARAP L2</i>	-		UTR only	0.9026072
ENST0000 0568455.1. uORF_CT G.6	2.100576331	CTG	chr16	+	75600601	75601938	<i>GABARAP L2</i>	-		UTR only	0.00087758
ENST0000 0359513.4. uORF_AT C.1	1.987842832	ATC	chr11	+	46639311	46666901	<i>ATG13</i>	ENST00000529655.1.uORF _ATC.1.ENST00000528494 .1.uORF_ATC.1		CDSpartial	0.00012783
ENST0000 0359513.4. uORF_CT G.7	1.783690992	CTG	chr11	+	46639331	46665838	<i>ATG13</i>	ENST00000528494.1.uORF _CTG.7		UTR only	0.00087758
ENST0000 0369070.1. uORF_GT G.2	1.737868356	GTG	chr6	-	106773655	106764127	<i>ATG5</i>	ENST00000369076.3.uORF _GTG.2		UTR only	0.00028977
ENST0000 0568455.1. uORF_GT G.2	1.710220375	GTG	chr16	+	75600551	75600574	<i>GABARAP L2</i>	-		UTR only	0.5749201
ENST0000 0568455.1. uORF_GT G.1	1.634252651	GTG	chr16	+	75600502	75601938	<i>GABARAP L2</i>	-		UTR only	0.00028977
ENST0000 0369070.1. uORF_TTG 2	1.625731632	TTG	chr6	-	106773631	106764127	<i>ATG5</i>	ENST00000369076.3.uORF _TTG.2		UTR only	0.00087758
ENST0000 0359513.4. uORF_CT G.8	1.502337399	CTG	chr11	+	46639372	46639401	<i>ATG13</i>	ENST00000533325.1.uORF _CTG.8.ENST00000577256 .1.uORF_CTG.8.ENST0000 0524625.1.uORF_CTG.8.E NST00000582547.1.uORF _CTG.8.ENST00000395549. 3.uORF_CTG.1.ENST0000 0583249.1.uORF_CTG.8.E NST00000526508.1.uORF _CTG.8.ENST00000451945. 1.uORF_CTG.13.ENST000 00312040.4.uORF_CTG.13. ENST00000530500.1.uORF _CTG.8.ENST00000580238 .1.uORF_CTG.8.ENST0000 0578626.1.uORF_CTG.8.E NST00000581438.1.uORF _CTG.8.ENST00000581416. 1.uORF_CTG.8.ENST0000 0528494.1.uORF_CTG.8.E NST00000529655.1.uORF _CTG.8.ENST00000434074. 1.uORF_CTG.13		UTR only	0.00198221
ENST0000 0359513.4. uORF_GT G.6	1.497221015	GTG	chr11	+	46639320	46666901	<i>ATG13</i>	ENST00000528494.1.uORF _GTG.6.ENST00000529655 .1.uORF_GTG.6		CDSpartial	0.00012783
ENST0000 0586417.1. uORF_AC G.1	1.470961764	ACG	chr19	+	10654653	10654667	<i>ATG4D</i>	ENST00000585752.1.uORF _ACG.1.ENST0000058885 7.1.uORF_ACG.1.ENST000 00588667.1.uORF_ACG.1, ENST00000309469.4.uORF _ACG.1		UTR only	0.00028977
ENST0000 0496423.1. uORF_AC G.1	1.428896253	ACG	chr3	-	112280427	112280359	<i>ATG3</i>	ENST00000402314.2.uORF _ACG.1.ENST0000028329 0.5.uORF_ACG.3		CDSpartial	0.00010328
ENST0000 0359513.4. uORF_CT G.4	1.401178938	CTG	chr11	+	46639268	46665838	<i>ATG13</i>	ENST00000528494.1.uORF _CTG.4		UTR only	0.00087758
ENST0000 0586417.1. uORF_CT G.1	1.314234062	CTG	chr19	+	10654583	10654594	<i>ATG4D</i>	-		UTR only	0.9026072
ENST0000 0588857.1. uORF_AT G.2	1.24595116	ATG	chr19	+	10654602	10654667	<i>ATG4D</i>	ENST00000309469.4.uORF _ATG.2.ENST00000585752 .1.uORF_ATG.2.ENST0000 0586417.1.uORF_ATG.2		UTR only	0.8038648

ENST00000359513.4.uORF_GT G.5	1.092360622	GTG	chr11	+	46639305	46666901	<i>ATG13</i>	ENST00000528494.1.uORF_GTG.5,ENST00000529655.1.uORF_GTG.5	CDSpartial	0.00012783
ENST00000369070.1.uORF_CT G.1	1.088920495	CTG	chr6	-	106773666	106773412	<i>ATG5</i>	ENST00000369076.3.uORF_CTG.1	UTR only	0.00087758
ENST00000369070.1.uORF_GT G.5	1.054336932	GTG	chr6	-	106773504	106773412	<i>ATG5</i>	ENST00000369076.3.uORF_GTG.5,ENST00000360666.4.uORF_GTG.1	UTR only	0.00011838
ENST00000369070.1.uORF_TTG .1	0.996280549	TTG	chr6	-	106773660	106773412	<i>ATG5</i>	ENST00000369076.3.uORF_TTG.1	UTR only	0.00035863
ENST00000568455.1.uORF_AC G.1	0.969555193	ACG	chr16	+	75600638	75601972	<i>GABARAP L2</i>	-	UTR only	0.00035863
ENST00000302386.5.uORF_AT G.4	0.813640705	ATG	chr17	-	7145898	7145890	<i>GABARAP</i>	-	UTR only	0.2534805
ENST00000546360.1.uORF_CT G.3	0.715011923	CTG	chr17	-	66453605	66453522	<i>WIP1</i>	ENST00000589316.1.uORF_CTG.3	UTR only	0.00087758
ENST00000546360.1.uORF_CT G.2	0.518560233	CTG	chr17	-	66453614	66453522	<i>WIP1</i>	ENST00000589316.1.uORF_CTG.2	UTR only	0.00087758
ENST00000369070.1.uORF_TTG .6	0.401149823	TTG	chr6	-	106773410	106773402	<i>ATG5</i>	ENST00000360666.4.uORF_TTG.2,ENST00000369076.3.uORF_TTG.6	UTR only	7.28E-05
ENST00000588857.1.uORF_AT G.1	0.360045192	ATG	chr19	+	10654596	10654667	<i>ATG4D</i>	ENST00000586417.1.uORF_ATG.1,ENST00000585752.1.uORF_ATG.1,ENST00000309469.4.uORF_ATG.1	UTR only	0.9026072
ENST00000302386.5.uORF_AC G.4	0.355194683	ACG	chr17	-	7145904	7145890	<i>GABARAP</i>	-	UTR only	0.00198221
ENST00000586417.1.uORF_AT C.1	0.2372352	ATC	chr19	+	10654573	10654614	<i>ATG4D</i>	-	UTR only	0.00010328
ENST00000359513.4.uORF_TTG .1	0.16025574	TTG	chr11	+	46639422	46666901	<i>ATG13</i>	ENST00000528494.1.uORF_TTG.1,ENST00000529655.1.uORF_TTG.1	CDSpartial	0.00012783
ENST00000392021.3.uORF_GT G.4	0.123538204	GTG	chr2	+	234160360	234160452	<i>ATG16L1</i>	ENST00000392018.1.uORF_GTG.1,ENST00000417017.1.uORF_GTG.3,ENST00000392017.4.uORF_GTG.6,ENST00000392020.4.uORF_GTG.3,ENST00000419681.1.uORF_GTG.4,ENST00000444735.1.uORF_GTG.4,ENST00000347464.5.uORF_GTG.6,ENST00000373525.5.uORF_GTG.4	UTR only	0.00031291
ENST00000302386.5.uORF_GT G.6	0.008354834	GTG	chr17	-	7145773	7145744	<i>GABARAP</i>	-	UTR only	0.00010328
ENST00000369076.3.uORF_CT G.5	19.00261234	CTG	chr6	-	106773536	106773402	<i>ATG5</i>	ENST00000369070.1.uORF_CTG.5	UTR only	4.22E-05
ENST00000369076.3.uORF_AT G.1	18.70669535	ATG	chr6	-	106764108	106764073	<i>ATG5</i>	ENST00000343245.3.uORF_ATG.3,ENST00000360666.4.uORF_ATG.1,ENST00000369070.1.uORF_ATG.1	CDSpartial	0.00010328
ENST00000317868.4.uORF_CT G.3	8.044775339	CTG	chr1	+	63249824	63269406	<i>ATG4C</i>	ENST00000371120.3.uORF_CTG.3	UTR only	0.00031291
ENST00000317868.4.uORF_CT G.8	7.500556761	CTG	chr1	+	63249881	63269406	<i>ATG4C</i>	ENST00000371120.3.uORF_CTG.8	UTR only	0.00011838
ENST00000435644.2.	23.18156575	ATG	chr8	-	53626738	53626724	<i>RB1CC1</i>	ENST00000025008.5.uORF_ATG.1,ENST00000517963	UTR only	0.00198221

uORF_AT G.1									.1.uORF_ATG.2.ENST0000 0518710.1.uORF_ATG.1,E NST00000518211.1.uORF_ ATG.1		
ENST0000 0435644.2. uORF_TTG .1	21.73051614	TTG	chr8	-	53626935	53626894	<i>RB1CC1</i>		ENST00000025008.5.uORF _TTG.1,ENST00000518211 .1.uORF_TTG.1,ENST0000 0518710.1.uORF_TTG.1,E NST00000517963.1.uORF_ TTG.1	UTR only	0.00010328
ENST0000 0369076.3. uORF_CT G.3	19.27891224	CTG	chr6	-	106773615	106773412	<i>ATG5</i>		ENST00000369070.1.uORF _CTG.3	UTR only	0.00035863
ENST0000 0369076.3. uORF_CT G.7	18.51639297	CTG	chr6	-	106773456	106773412	<i>ATG5</i>		ENST00000369070.1.uORF _CTG.7,ENST00000360666 .4.uORF_CTG.2	UTR only	3.78E-06
ENST0000 0369076.3. uORF_TTG .8	17.46064985	TTG	chr6	-	106764134	106764114	<i>ATG5</i>		ENST00000369070.1.uORF _TTG.8,ENST00000343245 .3.uORF_TTG.6,ENST0000 0360666.4.uORF_TTG.4	UTR only	0.00031291
ENST0000 0356136.3. uORF_GT G.3	16.80914625	GTG	chr11	+	75526349	75526363	<i>UVRAG</i>		-	UTR only	4.22E-05
ENST0000 0371120.3. uORF_CT G.8	11.0504456	CTG	chr1	+	63249881	63269406	<i>ATG4C</i>		ENST00000317868.4.uORF _CTG.8	UTR only	0.00087758
ENST0000 0317868.4. uORF_AT G.1	9.017057651	ATG	chr1	+	63269420	63269455	<i>ATG4C</i>		ENST00000371118.1.uORF _ATG.1,ENST00000371120 .3.uORF_ATG.1	UTR only	0.00198221
ENST0000 0458350.3. uORF_AT G.1	8.286838502	ATG	chr5	+	81272042	81272059	<i>ATG10</i>		-	UTR only	0.00087758
ENST0000 0345734.3. uORF_AT G.1	0.017910246	ATG	chrX	+	107335043	107369354	<i>ATG4A</i>		ENST00000372232.3.uORF _ATG.1,ENST00000372246 .3.uORF_ATG.1,ENST0000 0545696.1.uORF_ATG.1,E NST00000372254.3.uORF_ ATG.1,ENST00000343524. 5.uORF_ATG.1	CDSpartial	0.00087758

**Table S3.** ExAC singleton variants associated with uORFs of *ATG* genes.

uORF_ID	uORF_s core	Chromosome	location	ref_allele	alt_allele	Strand	ref_codon	alt_codon	Gene	allele_frequency
ENST00000317868.4.uO RF ATG.1	9.017057 651	chr1	632694 21	T	G	+	ATG	AGG	<i>ATG4C</i>	8.24E-06
ENST00000360666.4.uO RF CTG.3	4.136076 832	chr6	106764 110	C	G	-	CTG	CTC	<i>ATG5</i>	8.24E-06
ENST00000435644.2.uO RF CTG.14	19.37154 001	chr8	535980 75	C	T	-	CTG	CTA	<i>RB1CC1</i>	8.33E-06
ENST00000435644.2.uO RF CTG.14	19.37154 001	chr8	535980 75	C	A	-	CTG	CTT	<i>RB1CC1</i>	8.33E-06
ENST00000435510.2.uO RF CTG.2	9.394652 399	chr10	648931 49	G	T	+	CTG	CTT	<i>NRBF2</i>	8.25E-06
ENST00000395544.4.uO RF CTG.12	20.05793 489	chr17	197707 73	G	A	-	CTG	TTG	<i>ULK2</i>	8.50E-06
ENST00000395544.4.uO RF CTG.11	18.66606 084	chr17	197707 82	A	C	-	CTG	CGG	<i>ULK2</i>	8.51E-06
ENST00000262039.4.uO RF CTG.2	19.09517 645	chr18	395352 13	G	A	+	CTG	CTA	<i>PIK3C3</i>	8.24E-06
ENST00000588156.1.uO RF CTG.1	2.433656 987	chr18	396378 14	C	G	+	CTG	GTG	<i>PIK3C3</i>	8.24E-06
ENST00000588156.1.uO RF CTG.1	2.433656 987	chr18	396378 16	G	T	+	CTG	CTT	<i>PIK3C3</i>	8.24E-06
ENST00000374837.3.uO RF CTG.7	6.445196 579	chr20	331377 65	C	G	+	CTG	GTG	<i>MAP1L C3A</i>	8.24E-06
ENST00000371120.3.uO RF GTG.5	11.70672 367	chr1	632694 30	G	C	+	GTG	CTG	<i>ATG4C</i>	8.24E-06
ENST00000247178.5.uO RF GTG.1	19.13701 322	chr14	558785 64	C	T	-	GTG	GTA	<i>ATG14</i>	8.59E-06
ENST00000435644.2.uO RF ATC.4	18.82498 515	chr8	535980 71	G	T	-	ATC	ATA	<i>RB1CC1</i>	8.32E-06
ENST00000268607.5.uO RF ATC.4	19.37333 67	chr16	874260 23	A	G	+	ATC	GTC	<i>MAP1L C3B</i>	1.04E-05
ENST00000458350.3.uO RF ATT.4	3.818852 181	chr5	812833 84	T	G	+	ATT	AGT	<i>ATG10</i>	8.24E-06



**Table S4.** Yeast strains used in the study.

Name	Genotype
SEY6210	MATa <i>leu2-3,112 ura3-52 his3-Δ200 trp1-Δ901 suc2-Δ9 lys2-801 GAL</i>
WLY176	SEY6210 <i>pho13Δ pho8Δ60</i>
YYY140	WLY176 <i>GFP-ATG8::LEU2</i>
YYY178	WLY176 <i>GFP-ATG8::LEU2 atg5Δ::KAN</i>
YYY182	WLY176 <i>GFP-ATG8::LEU2 atg5Δ::KAN pRS416-ATG5 5'UTR-ATG5-PA::URA3</i>
YYY193	WLY176 <i>GFP-ATG8::LEU2 atg5Δ::KAN pRS416-ATG5 5'UTR(mut3)-ATG5-PA::URA3</i>
YYY194	WLY176 <i>GFP-ATG8::LEU2 atg5Δ::KAN pRS416-ATG5 5'UTR(mut2)-ATG5-PA::URA3</i>
YYY195	WLY176 <i>GFP-ATG8::LEU2 atg5Δ::KAN pRS416-ATG5 5'UTR(mut1)-ATG5-PA::URA3</i>
YYY232	SEY6210 <i>atg13Δ::HIS3 pRS406-ATG19 5'UTR(mut)-ATG19-PA::URA3</i>
YYY233	SEY6210 <i>atg13Δ::HIS3 pRS406-ATG19 5'UTR-ATG19-PA::URA3</i>
YYY234	SEY6210 <i>atg13Δ::HIS3</i>
YYY236	WLY176 <i>GFP-ATG8::LEU2 atg12Δ::HIS3 pRS406-ATG12 5'UTR-ATG12-PA::URA3</i>
YYY237	WLY176 <i>GFP-ATG8::LEU2 atg12Δ::HIS3</i>
YYY238	WLY176 <i>GFP-ATG8::LEU2 atg12Δ::HIS3 pRS406-ATG12 5'UTR(mut)-ATG12-PA::URA3</i>
YYY239	WLY176 <i>pCu-GFP-ATG8::LEU2 atg13Δ::HIS3 pRS406-ATG13 5'UTR(mut)-ATG13-PA::URA3</i>
YYY247	WLY176 <i>pCu-GFP-ATG8::LEU2 atg13Δ::HIS3</i>
YYY249	WLY176 <i>pCu-GFP-ATG8::LEU2 atg13Δ::HIS3 pRS416-pCu-ATG13-PA::URA3</i>
YYY250	WLY176 <i>pCu-GFP-ATG8::LEU2 atg13Δ::HIS3 pRS406-ATG13 5'UTR-ATG13-PA::URA3</i>
YYY253	WLY176 <i>pCu-GFP-ATG8::LEU2 atg13Δ::HIS3 gcn2Δ::KAN pRS406-ATG13 5'UTR(mut)-ATG13-PA::URA3</i>
YYY254	WLY176 <i>pCu-GFP-ATG8::LEU2 atg13Δ::HIS3 gcn2Δ::KAN pRS406-ATG13 5'UTR-ATG13-PA::URA3</i>

The yeast strain names and genotypes are indicated. The parental strain used for subsequent genetic modification is indicated as the first part of the genotype.

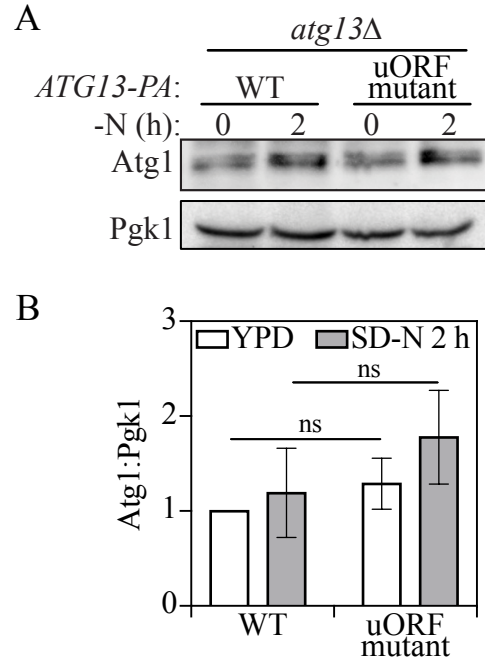
**Table S5.** Primers for plasmid cloning and strains construction.

Firefly for	ATCCATCTTGCTCCAACACC
Firefly rev	TCGCGGTTGTTACTTGACTG
Renilla for	GGAATTATAATGCTTATCTACGTGC
Renilla rev	CTGCGAAAAATGAAGACCTTTTAC
ATG4B for	ACGTCCTGAACCTGTCCTA
ATG4B rev	CCCGACCCAGGATTTTCAA
ATG12 for	AAGTGGGCAGTAGAGCGAAC
ATG12 rev	CACGCCTGAGACTTGCAGTA

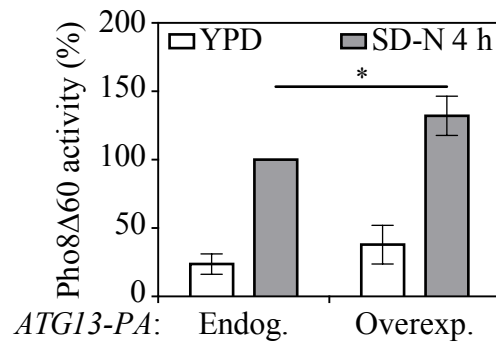
**Table S6.** Primers for RT-qPCR in human cells.

ATG5TAG FC ins F	ATAGGGCGAATTGGGTACCACCGGATAACAGAGTAACTGG
ATG5TAG FC ins R	GCAATTAACCCTCACTAAAGGGGAGAAAAGCAACCTGACCTAC
ATG5TAG FC tem F	GTAGGTCAGGTTGCTTTCTCCCCTTTAGTGAGGGTTAATTGC
ATG5TAG FC tem R	CCAGTTACTCTGTTATCCGGTGGTACCCAATTCGCCCTAT
ATG5 uORF delta FC For	GATAAATTATCATCACCTTTTTACTAAATATAAGTATGAATGACATTAACAATTACTTTG
ATG5 uORF delta FC REV	CAAAGTAATTGTTAATGTCATTACTTATATTTAGTGTAAGGATGATGATAATTTATC
Atg19 FC tem F	TAGCATTGTCCTCTGTTATTCGTCCTTTAGTGAGGGTTAATTGC
Atg19 FC tem R	TCGTAAACCAACAGGGTGTGGTACCCAATTCGCCCTAT
Atg19 FC ins F	ATAGGGCGAATTGGGTACCACACCTGTTGGTTTACGA
Atg19 FC ins R	GCAATTAACCCTCACTAAAGGGACGAATAACAGAGGACAATGCTA
Atg19 SDM F1	AAATCTCCTTGATTTGAGTTTGATAAGGTGTATCAGACGAAAAGAAGACTGAATC
Atg19 SDM R1	ATCAAACCTCAAATCAAGGAGATTACGTGAGCCTTGAATTCCTTTTCC
Atg19 SDM F2	CATTGCATAGTATTTGTTTACCTGAGGAAAAAGGAATTCAAGGCTCACGT
Atg19 SDM R2	TCAGGTAAACAAATACTATGCAATGTCACACGCCCTTTTCCGG
Atg5-PA 416 SDM TTG F1	ATAGGAAACCTTTGTTGTAAGTATGAATGACATTAACAATTACTTTGGAATGGTGAGC
Atg5-PA 416 SDM TTG F2	AAATATTGAAGTAGCTTGCTCAGAAGTGCATTGAATTTTGTCTTTTGGT
Atg5-PA 416 SDM TTG R1	CATACTTACAACAAAGGTTTCTATCTCCGTTCTTCTAGAACCAAAAGAACAAAA
Atg5-PA 416 SDM TTG R2	TGAGCAAGCTACTTCAATATTTAGTGTAAGGATGATGATAATTTATCTAAAGAGGC
Atg5-PA 416 SDM TTG F3	GAAGTGCATTGAATTTTGTCTTTTGGTTCTAGAAGAACGGAGATAGG
Atg5-PA 416 SDM TTG R3	ACAAAAATTCAATCGCACTTCTGAGCATGCTACTTCATTATTTAGTGTAAGGATG
Atg5-PA 416 SDM TTG F4	AAATAATGAAGTAGCTTGCTCAGAAGTGCGAATGAATTTTGTCTTTTGGT
Atg5-PA 416 SDM TTG R4	TGAGCAAGCTACTTATGTATTTAGTGTAAGGATGATGATAATTTATCTAAAGAGGC
Atg5-PA 416 SDM TTG F5	TCATTTTGTGAAAGGAAGTCCAAGAGAAATTGCGGTGCTACG
Atg5-PA 416 SDM TTG R5	ACTTCCTTCAACAAAAATGAAGGATCGATCGATACCAGCACATT
Atg5-PA 416 SDM TTG F6	TAGTCAATTATTTGCCCTCATTGGAACAAGATTAAGCTTTCTTTCTTTGAC
Atg5-PA 416 SDM TTG R6	TGAGGGGCAAATAATTGACTAAATATGTTTCCCTTGGTACCCTTATTCGTA
ATG13TAG FC ins F	ATAGGGCGAATTGGGTACCACCGCTACGAAGATGATTCCTGA
ATG13TAG FC ins R	GCAATTAACCCTCACTAAAGGGGAGAAAAGCAACCTGACCTAC
ATG13TAG FC tem F	GTAGGTCAGGTTGCTTTCTCCCCTTTAGTGAGGGTTAATTGC
ATG13TAG FC tem R	TCAGGAATCATCTTCGTAGGCGGTACCCAATTCGCCCTAT
ATG12TAG FC ins F	ATAGGGCGAATTGGGTACCAGTCCATTAGTGCTGAGTATC
ATG12TAG FC ins R	GCAATTAACCCTCACTAAAGGGGAGAAAAGCAACCTGACCTAC
ATG12TAG FC tem F	GTAGGTCAGGTTGCTTTCTCCCCTTTAGTGAGGGTTAATTGC
ATG12TAG FC tem R	GATACTCAGACACTAATGGAACCGGTACCCAATTCGCCCTAT
ATG12 DEL F	CCTAACTGTATATTCTACAGTAGAGTGAACCAATGACAGTCAGCTGAAGCTTCGTACGC
ATG12 DEL R	CTGTAGGTTTCTTCTTAGACCATTCCAGCGCCCGGTATGCATAGGCCACTAGTGGATCTG
ATG12 DEL CHECK	CCTTGATTGAGATGGCATAG

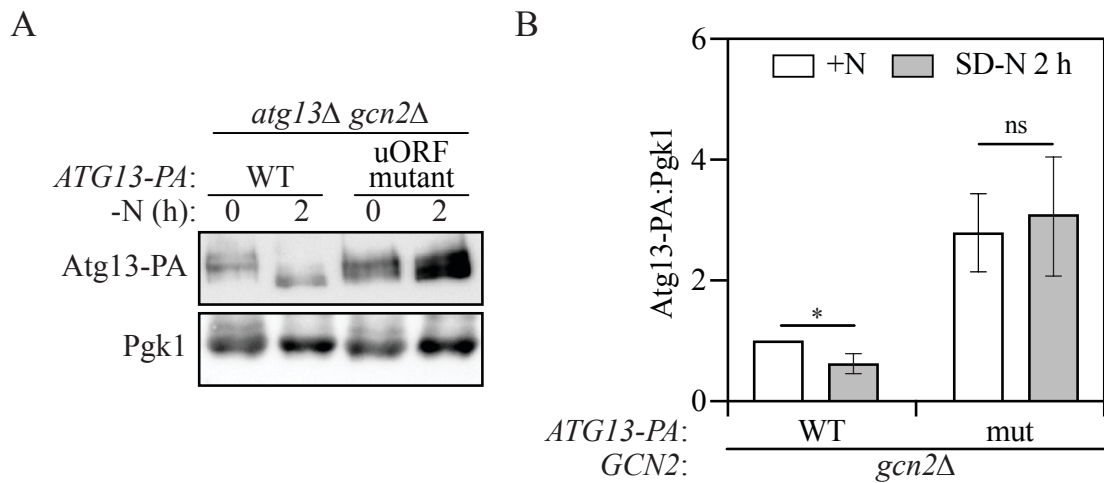
ATG12 SDM UORF F	AGTGAACCATTGACAGTATGAGTAGGATCCTAGAGAGCGAAAATGAAAC
ATG12 SDM UORF R	CATACTGTCAATGGTTCCTACTCTACTGTAGAATATACAGTTAGGGATGTACGTTTATTT
ATG13 SDM UORF F	GTTGAATAGCTTGAGTCATGGTTGCCGAAGAGGACATCGAGAA
ATG13 SDM UORF R	CATGACTCAAGCTATTCAACCGGGCTGTATGTTCTGCTTTCTTTTC
GCN2 DEL F	TCAATAATTTTCCGTTCCCTTAACACATACTATGTATAACGTACGCTGCAGGTGCGAC
GCN2 DEL R	TTAACTGATGCGTTATAGCGCCGCACAGATCTTTAAAGGCAATCGATGAATTCGAGCTCG
GCN2 DEL CHECK NAT	AAGAATCTTCCACCCATTG
Atg19-PA FC ins F	CCCTGACTTGGGAAGAAGTCCGGATCCCCGGGTAAATTA
Atg19-PA FC ins R	GCAATTAACCCCTACTAAAGGGGAGAAAGCAACCTGACCTAC
Atg19-PA FC tem F	GTAGGTCAGGTTGCTTTCTCCCTTAGTGAGGGTAAATTGC
Atg19-PA FC tem R	TTAATTAACCCGGGGATCCGGAGTTCTTCCCAAGTCAGGG
Atg19 del F	GGCACTTGCTTCAGTAACGCCCAAAGGAGAGTTCTGGTAACAGCTGAAGCTTCGTACGC
Atg19 del R	GTGAAAAGGTACTCATTGCTGTATAAAAATAGAGTTTGACGCATAGGCCACTAGTGGATCTG
Atg19 check F	CACATCACATTGAGAACGAGG
ATG13 SIDE-UORF F	GTTGAATTGCATGAGTCATGGTTGCCGAAGAGGACATCGAGAA
ATG13 SIDE-UORF R	CATGACTCATGCAATTCACCGGGCTGTATGTTCTGCTTTCTTTTC
ATG13 FAR-UORF F	TACACCTCCTGGCTCAAGTCTTGAAAAGAAAGCAGAACATACAGCCC
ATG13 FAR-UORF R	TGAGCCAGGAAGGTGTAAGTGGAATGTATTTGGTACCTATGAATTCGTTCT
ATG4B LUC for	GGGGTACCCTCGCCAGC-CGCGGGTTCGGGC
ATG4B LUC rev	CGACGCGTCTTCCAGTCCGGCCGCCGAC
ATG12 LUC for	GGGGTACCCTTGCTTGGAGACACTCGAGAG
ATG12 LUC rev	CGACGCGTGAAAACATTTCTAGGTCCGAGC
ATG4B-mut for	CCGCGTCGCGAAGCTGGCCCGTCG
ATG4B-mut rev	CGACGGGACGCCGCGGGG
ATG12-mut1 for	GCGCACACTCCTTTTAGGCCGCTG
ATG12-mut1 rev	ATTCGACCGAGCACAGAC
ATG12-mut2 for	GTCGAATGCGCTTACTCCAGTTAGG
ATG12-mut2 rev	CGAGCACAGACACGTTGC
ATG12-mut3 for	CGGTGGGCAACTTGTCTGTGCTC
ATG12-mut3 rev	CTCCTCTCCCGAGGTCTG
ATG12-mut4 for	GTTAGTAACGCTTCATGTGTTTCTCCG
ATG12-mut4 rev	GTTCAGAGGTCTGCGACA



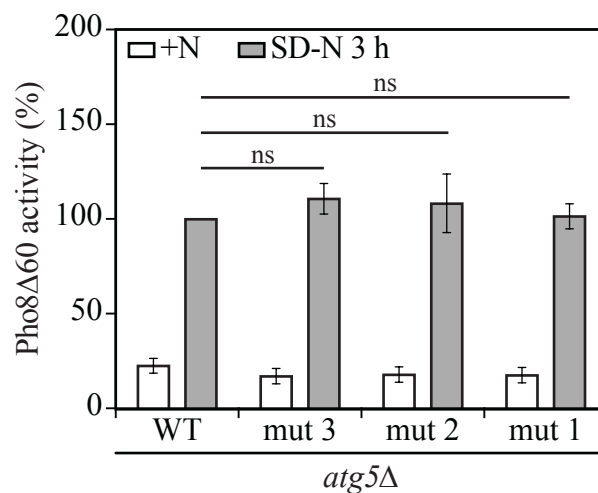
**Figure S1.** Atg1 protein expression levels are not affected by the *ATG13* uORF mutant. **(A)** Atg1 levels were measured by western blot in WT and *ATG13* uORF mutant cells under growing conditions and after 2 h of nitrogen starvation. Pgk1 was used as a loading control. **(B)** The ratio of Atg1 to Pgk1 was quantified. Mean±SD of  $n=3$  independent experiments are shown as indicated. ANOVA; ns: not significant.



**Figure S2.** Atg13 overexpression results in increased autophagy activity. Autophagy activity was measured using the Pho8Δ60 assay in WT (endogenous Atg13 expression) and Atg13 overexpression strains under growing conditions and after 4 h of nitrogen starvation. Error bars indicate the SD of 3 independent experiments. ANOVA; \*:  $p < 0.05$ .



**Figure S3.** Decreased Atg13-PA protein levels under 2-h nitrogen starvation conditions in a *gcn2Δ* strain. **(A)** Atg13-PA protein levels were measured by western blot in *atg13Δ gcn2Δ* cells expressing WT Atg13-PA or an *ATG13* uORF mutant under growing and 2-h nitrogen-starvation conditions; a representative image is shown. **(B)** The ratio of Atg13-PA to Pgk1 was quantified. Mean±SD of  $n=3$  independent experiments are shown as indicated. Student's *t*-test; \*:  $p<0.05$ , ns: not significant.



**Figure S4.** Autophagy activity was measured using the Pho8Δ60 assay in WT, and *ATG5* uORF mutant cells under growing conditions and after 3 h of nitrogen starvation. Mean±SD of  $n=3$  independent experiments are shown as indicated. ANOVA; ns: not significant.