Supplemental Table S1. Proteins Associated with Autophagosomes

Proteins that are associated with autophagosomes in only GLR cells

GENE NAME	Protein	FUNCTION
STX7*	Syntaxin 7	Membrane trafficking/fusion
STX12	Syntaxin 12	Membrane trafficking
NSF	N-ethylmaleimide-sensitive factor	Membrane trafficking
RAB5B*	Ras-related protein Rab-5B	Membrane trafficking
ANXA2*	Annexin A2	Membrane trafficking
CAV1*	Caveolin 1	Membrane trafficking/signaling
CAV2*	Caveolin 2	Membrane trafficking/signaling
GNB2	G Protein Subunit Beta 2	Signal transduction
RGSL2	Regulator of G-protein signaling like 2	Signal transduction
IGHG1	Ig gamma-1	Innate immunity
ATRNL1	Attractin-like protein 1	Innate immunity
PIGN	phosphatidylinositol glycan, class N	Glycolipid
ZNF662	ZNF662 protein	Transcriptional regulation
GNS	N-acetylglucosamine-6-sulfatase	Lysosomal enzyme
ARG1	Arginase-1	Urea cycle
NS3 (1b)	HCV non-structural protein 3	HCV nonstructural protein
NS4B (1b)	HCV non-structural protein 4B	HCV nonstructural protein
NS5A (1b)	HCV non-structural protein 5A	HCV nonstructural protein
NS5B (1b)	HCV non-structural protein 5B	HCV nonstructural protein

Proteins that are associated with autophagosomes in both GLR and Huh7-GFP-LC3 cells

GENE	NAME	FUNCTION
ATL3	Atlastin-3	Membrane fusion
RAB5A*	Ras-related protein Rab-5A	Membrane trafficking
RAB1B*	Ras-related protein Rab-1B	Membrane trafficking
SCARB2*	Scavenger receptor class B member 2	Membrane trafficking
ERC1	Rab6-interacting protein 1	Membrane trafficking
LRP4	Low density lipoprotein receptor-related protein 4	Membrane trafficking
LMAN2	Vesicular integral-membrane protein VIP36	Membrane trafficking
MAN1A1	Mannosyl-oligosaccharide 1,2-alpha-mannosidase IA	Membrane trafficking
TFRC*	Transferrin receptor	Membrane trafficking
YIPF5	Protein YIPF5	Membrane trafficking
SEC23B	Protein transport protein Sec23B	Membrane trafficking

SCAMP3	Secretory carrier-associated membrane protein 3	Membrane trafficking
PLIN3*	Perilipin-3	Membrane trafficking
ERGIC1	Endoplasmic reticulum-Golgi intermediate compartment protein 1	Membrane trafficking
SLC3A2	4F2 cell-surface antigen heavy chain	Transport
M6PR	Cation-dependent mannose-6-phosphate receptor	Transport
TM9SF4	Transmembrane 9 superfamily protein member 4	Transport/cell adhesion
ATP1A1	ATPase Na+/K+ Transporting Subunit Alpha 1	Ion channel transport
ATP5A1	ATP synthase subunit alpha, mitochondrial	Ion channel transport
ATP5B	ATP synthase subunit beta	Ion channel transport
LAMP1*	Lysosome-associated membrane glycoprotein 1	Autophagic cell death/apoptosis/transport
POR	NADPH--cytochrome P450 reductase	Electron transfer
CANX*	Calnexin	Receptor-mediated endocytosis/chaperone
CPD	Carboxypeptidase D	Protein processing
CTSD	Cathepsin D	Protein degradation
N4BP1	NEDD4-binding protein 1	Ubiquitination
ITPR3	ITPR3 protein	Secretion of intracellular calcium
ATP2A2	Sarcoplasmic/endoplasmic reticulum calcium ATPase 2	Secretion/transport
SPTBN1	Spectrin, beta, non-erythrocytic 1	Secretion
ERP44	Endoplasmic reticulum resident protein 44	Stress response
P4HB	Protein disulfide-isomerase	ER stress/apoptotic signaling
SCARB1*	Scavenger receptor class B member 1	Signal transduction
CALR	Calreticulin	Chaperon
PTPRK	Receptor-type tyrosine-protein phosphatase kappa	Signal transduction
OGDHL	Oxoglutarate dehydrogenase-like	Signal transduction
WUGSC:H_LUCA16.1	GTP-binding regulatory protein Gi alpha-2 chain	Signal transduction
NCSTN	Nicastrin	Signal transduction
DUSP14	Dual specificity protein phosphatase 14	Signal transduction
NOMO3	Nodal modulator 3	Signal transduction
ANPEP	Aminopeptidase N	Signal transduction

GNB1	Guanine nucleotide binding protein (G protein), beta polypeptide 1	Signal transduction
BCAM	Basal cell adhesion molecule	Cell adhesion/signal transduction
ICAM1	Intercellular adhesion molecule 1	Cell adhesion/signal transduction
ITGA2	Integrin alpha-2	Cell adhesion/signal transduction
DSC1	Desmocollin 1	Cell adhesion
SENP2	Sentrin-specific protease 2	mRNA transport/protein transport/signaling
PPIB	Peptidyl-prolyl cis-trans isomerase B	Protein folding
PDIA3	Protein disulfide-isomerase A3	Protein folding/apoptosis/signal transduction
PDIA4	Protein disulfide-isomerase A4	Protein folding/secretion/ER stress
TRA1	Tumor rejection antigen (Gp96) 1	Protein folding/stress response
NR5A2	Nuclear receptor subfamily 5 group A member 2	Transcriptional regulation
ZNF648	Zinc finger protein 648	Transcriptional regulation
NUP188	Nucleoporin NUP188	Nuclear pore complex
ZNF563	Zinc finger protein 563	Transcriptional regulation
KDR	Vascular endothelial growth factor receptor 2	Angiogenesis/cell proliferation/apoptosis
HKR3	HKR3 protein	Metal ion binding
GANAB	Neutral alpha-glucosidase AB	N-glycan metabolism
LMNA	Lamin A/C	DNA transcription/repair

Proteins that are associated with autophagosomes in only Huh7-GFP-LC3 cells

GENE	NAME	FUNCTION
HSPD1	Mitochondrial heat shock 60kD protein 1 variant 1	Protein folding
PDIA6	Protein disulfide-isomerase A6	Protein folding/apoptosis
CCT6A	T-complex protein 1 subunit zeta	Protein folding
TOR1B	Torsin-1B	Protein folding
RPN1	Ribophorin I	Glycosylation
RPN2	Ribophorin 2	Glycosylation
PCYOX1	Prenylcysteine oxidase 1	Protein catabolic process
SURF4	Surfeit 4	Membrane trafficking
SLC2A1	Solute carrier family 2, facilitated glucose transporter member 1	Transport
SLC25A13	Calcium-binding mitochondrial carrier protein Aralar2	Transport
VDAC2	Voltage-dependent anion-selective channel protein 2	Transport
ATP1B3	Sodium/potassium-transporting ATPase subunit beta-3	Ion transport/transport
ITGB1	Integrin beta	Cell adhesion

RALA	Ras-related protein Ral-A	Exocytosis/cell cycle
PON2	Serum paraoxonase/arylesterase 2	Oxidative stress response
HSP90AA1	Heat shock protein HSP 90-beta	Stress response
EGFR	Epidermal growth factor receptor	Signal transduction
YWHAB	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, beta	Signal transduction
CAT	Catalase	Signal transduction
RAP1B	Ras-related protein Rap-1b	Signal transduction
COPS2	COP9 signalosome complex subunit 2	Ubiquitination/signal transduction
UBC	Polyubiquitin-C	Ubiquitination/signal transduction
BSG	Basign	Immunity
ALCAM	CD166	Immunity
ANXA1	Annexin A1	Immunity
HLA-DRB1	MHC class II antigen	Immunity
S100A9	S100 calcium binding protein A9	Immunity
LYZ	Lysozyme C	Immunity
POLK	Polymerase kappa isoform 1	DNA repair
HIST1H4A	Histone H4	Transcription regulation
HIST1H2BC	Histone H2B	Transcription regulation
H2AFY	Histone H2A	Transcription regulation
HIST1H3A	Histone H3	Transcription regulation
ZNF276	Zinc finger protein 276	Transcription regulation
SCNM1	Sodium channel modifier 1	mRNA processing
PCF11	Pre-mRNA cleavage complex 2 protein Pcf11	mRNA processing
PES1	Pescadillo homolog 1	rRNA processing
NCEH1	Neutral cholesterol ester hydrolase 1	Lipid metabolism
FDFT1	Squalene synthetase	Cholesterol metabolism
PRKCSH	Glucosidase 2 subunit beta	N-glycan metabolism
SACM1L	Phosphatidylinositide phosphatase SAC1	Hydrolase
IFT80	Intraflagellar transport 80 homolog	Motile and sensory cilia
TMEM	transmembrane protein 2	Development
C8orf73	Maestro heat-like repeat-containing protein family member 6	Unknown
ILVBL	Acetolactate synthase-like protein	Unknown

Asterisks (*) denote proteins that had previously been reported to be important for HCV replication. The proteins and their references are: STX7 (1), RAB5B (2, 3), ANXA2 (4, 5), CAV1 (6),

CAV2 (4, 7), RAB1B (8), RAB5A (9, 10), SCARB2 (11), TFRC (12), PLIN3 (13), LAMP1 (14, 15), CANX (16), and SCARB1 (17, 18).

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