



**Supplemental Fig. Bimolecular Fluorescence Complementation (BiFC) platforms.** (A) *Upper left panel*, table of BiFC detected by Liat1 self-interaction using indicated plasmid combinations. “+” indicates reconstituted fluorescence and “-” indicates absence of fluorescence. *Upper right panel*, Liat1-YC expression detected with an anti-GFP antibody. *Lower panels*, lack of BiFC detected with the individual indicated plasmids. (B) *Upper left panel*, table of Liat1-Jmj6 BiFC detected. *Upper right panel*, Liat1-Jmj6 BiFC detected with indicated plasmid combinations. *Lower panels*, lack of BiFC detected with the individual indicated plasmids. (C) Same as in B except with Liat1-Ate1 BiFC. *White bars*, 10  $\mu$ m. DAPI, 4'-6-diamidino-2-phenylindole.

**Supplemental Table S1.** Plasmids used in this study.

Plasmid	Description	Source or Reference
pCDNA3.0-Neo	Amp <sup>R</sup> ; Neo <sup>R</sup> ; Expression vector for cloning your gene of interest from the CMV promoter.	Invitrogen
pCDNA3.1-Hyg	Amp <sup>R</sup> ; Hyg <sup>R</sup> ; Expression vector for cloning a gene of interest.	Invitrogen
pACT2	Amp <sup>R</sup> ; <i>LEU2</i> selectable marker in yeast. Y2H expression vector with P <sub>ADHI</sub> promoter. Produces ha-tagged Gal4-AD fusion.	Clontech
pAS2	Amp <sup>R</sup> ; (also called pAS1-CYH2); <i>CYH</i> selectable marker in yeast. Y2H expression vector with P <sub>ADHI</sub> promoter. Produces ha-tagged Gal4-DBD fusion.	Clontech
pEGFP-N1	Kan <sup>R</sup> ; Neo <sup>R</sup> ; eGFP expression vector under the control of mammalian P <sub>CMV</sub> promoter.	Clontech
pEYFP-N1	Kan <sup>R</sup> ; Neo <sup>R</sup> ; eYFP expression vector under the control of mammalian P <sub>CMV</sub> promoter.	Clontech
LentiCRISPR v2	Amp <sup>R</sup> ; Pur <sup>R</sup> ; lentivirus CRISPR mammalian expression vector. Cas9 is expressed by the P <sub>EF-1<math>\alpha</math></sub> promoter; the single-guide RNA is expressed by the P <sub>U6</sub> promoter.	(1)
pAA01	Amp <sup>R</sup> ; pcDNA3.1-based plasmid encoding mouse 3xHA <sup>Liat1</sup> $\Delta$ E <sup>(<math>\Delta</math>14-23)</sup> under the control of mammalian P <sub>CMV</sub> promoter.	Present study
pAA02	Amp <sup>R</sup> ; pcDNA3.1-based plasmid encoding mouse 3xHA <sup>Liat1</sup> $\Delta$ K <sup>(<math>\Delta</math>53-60)</sup> under the control of mammalian P <sub>CMV</sub> promoter.	Present study
pAA03	Kan <sup>R</sup> ; pEGFP-N1-based vector containing the IDR of mouse Liat1 <sup>(1-118)</sup> fused to the eGFP cDNA to express 3xHA <sup>IDR</sup> -GFP under the control of mammalian P <sub>CMV</sub> promoter.	Present study
pAA05	Amp <sup>R</sup> ; LentiCRISPR v2-based plasmid expressing <i>S. pyogenes</i> Cas9 and CRISPR <sup>Liat1</sup> -A.	Present study

pAA06	Amp <sup>R</sup> ; LentiCRISPR v2-based plasmid expressing <i>S. pyogenes</i> Cas9 and CRISPR <sup>Liat1</sup> -B.	Present study
pCER020	Amp <sup>R</sup> ; pACT2-based plasmid encoding Gal4-AD fused to <sup>ha</sup> Liat1( <sup>Δ</sup> 1-124) under the control of the yeast P <sub>ADHI</sub> promoter.	(2)
pCER021	Amp <sup>R</sup> ; pACT2-based plasmid encoding Gal4-AD fused to <sup>ha</sup> Liat1( <sup>113-165</sup> ) under the control of the yeast P <sub>ADHI</sub> promoter.	(2)
pCER022	Amp <sup>R</sup> ; pACT2-based plasmid encoding Gal4-AD fused to <sup>ha</sup> Liat1( <sup>Δ</sup> 153-228) under the control of the yeast P <sub>ADHI</sub> promoter.	(2)
pCB179	Amp <sup>R</sup> ; pcDNA3.1-based plasmid encoding mouse <sup>3xHA</sup> Liat1 under the control of the mammalian P <sub>CMV</sub> promoter.	(2)
pCB239	Amp <sup>R</sup> ; pAS2-based plasmid encoding Gal4-DBD domain fused to <sup>ha</sup> Liat1( <sup>1-228</sup> ) under the control of the yeast P <sub>ADHI</sub> promoter.	(2)
pCB409	Amp <sup>R</sup> ; pH10UE-based vector used for the bacterial expression of a fusion between His <sub>10</sub> -ubiquitin and Ate1 <sup>1A7A</sup> .	(2)
pCB432	Amp <sup>R</sup> ; pACT2-based plasmid encoding Gal4-AD fused to <sup>ha</sup> Liat1( <sup>1-228</sup> ) under the control of the yeast P <sub>ADHI</sub> promoter.	(2)
pCB433	Amp <sup>R</sup> ; pACT2-based plasmid encoding Gal4-AD fused to <sup>ha</sup> Liat1( <sup>61-228</sup> ) under the control of the yeast P <sub>ADHI</sub> promoter.	(2)
pCB434	Amp <sup>R</sup> ; pACT2-based plasmid encoding Gal4-AD fused to <sup>ha</sup> Liat1( <sup>113-228</sup> ) under the control of the yeast P <sub>ADHI</sub> promoter.	(2)
pCB435	Amp <sup>R</sup> ; pACT2-based plasmid encoding Gal4-AD fused to <sup>ha</sup> Liat1( <sup>135-228</sup> ) under the control of the yeast P <sub>ADHI</sub> promoter.	(2)

pCB436	Amp <sup>R</sup> ; pACT2-based plasmid encoding Gal4-AD fused to <sup>ha</sup> Liat1 <sup>(135-165)</sup> under the control of the yeast P <sub>ADHI</sub> promoter.	(2)
pCB437	Amp <sup>R</sup> ; pACT2-based plasmid encoding Gal4-AD fused to <sup>ha</sup> Liat1 <sup>(1-165)</sup> under the control of the yeast P <sub>ADHI</sub> promoter.	(2)
pCB439	Amp <sup>R</sup> ; pACT2-based plasmid encoding Gal4-AD fused to <sup>ha</sup> Liat1 <sup>(95-228)</sup> under the control of the yeast P <sub>ADHI</sub> promoter.	(2)
pCB458	Amp <sup>R</sup> ; pcDNA-Neo-based plasmid encoding Jmjd6 <sup>3xflag</sup> under the control of the mammalian P <sub>CMV</sub> promoter.	(2)
pCB481	Amp <sup>R</sup> ; Neo <sup>R</sup> ; pcDNA3.0-based plasmid expressing the N-terminal portion of eYFP (amino acids 1-154) and linker upstream of the multiple cloning site.	Present study
pCB482	Amp <sup>R</sup> ; Neo <sup>R</sup> ; pcDNA3.0-based plasmid expressing the C-terminal portion of eYFP (amino acids 154-238) and linker upstream of the multiple cloning site.	Present study
pCB483	Amp <sup>R</sup> ; Neo <sup>R</sup> ; pcDNA3.0-based plasmid expressing the linker and N-terminal portion of eYFP (amino acids 1-154) downstream of the multiple cloning site.	Present study
pCB484	Amp <sup>R</sup> ; Neo <sup>R</sup> ; pcDNA3.0-based plasmid expressing the linker and C-terminal portion of eYFP (amino acids 154-238) downstream of the multiple cloning site.	Present study
pCB486	Amp <sup>R</sup> ; pCB481-based plasmid expressing the N-terminal half of eYFP (amino acids 1-154) fused to Ate1 <sup>1A7A</sup> (YN-ATE1) from the P <sub>CMV</sub> promoter.	Present study
pCB487	Amp <sup>R</sup> ; pCB482-based plasmid expressing the C-terminal half of eYFP (amino acids 154-238) fused to Ate1 <sup>1A7A</sup> (YC-ATE1) from the P <sub>CMV</sub> promoter.	Present study

pCB488	Amp <sup>R</sup> ; pCB483-based plasmid expressing Ate1 <sup>1A7A</sup> fused to the N-terminal half of eYFP (amino acids 1-154) (ATE1-YN) from the P <sub>CMV</sub> promoter.	Present study
pCB489	Amp <sup>R</sup> ; pCB484-based plasmid expressing Ate1 <sup>1A7A</sup> fused to the C-terminal half of eYFP (amino acids 154-238) (ATE1-YC) from the P <sub>CMV</sub> promoter.	Present study
pCB490	Amp <sup>R</sup> ; pCB481-based plasmid expressing the N-terminal half of eYFP (amino acids 1-154) fused to Liat1 (YN-Liat1) from the P <sub>CMV</sub> promoter.	Present study
pCB491	Amp <sup>R</sup> ; pCB482-based plasmid expressing the C-terminal half of eYFP (amino acids 154-238) fused to Liat1 (YC-Liat1) from the P <sub>CMV</sub> promoter.	Present study
pCB492	Amp <sup>R</sup> ; pCB483-based plasmid expressing Liat1 fused to the N-terminal half of eYFP (amino acids 1-154) (Liat1-YN) from the P <sub>CMV</sub> promoter.	Present study
pCB493	Amp <sup>R</sup> ; pCB484-based plasmid expressing Liat1 fused to the C-terminal half of eYFP (amino acids 154-238) (Liat1-YC) from the P <sub>CMV</sub> promoter.	Present study
pCB494	Amp <sup>R</sup> ; pCB481-based plasmid expressing the N-terminal half of eYFP (amino acids 1-154) fused to Jmjd6 (YN-Jmjd6) from the P <sub>CMV</sub> promoter.	Present study
pCB495	Amp <sup>R</sup> ; pCB482-based plasmid expressing the C-terminal half of eYFP (amino acids 154-238) fused to Jmjd6 (YC-Jmjd6) from the P <sub>CMV</sub> promoter.	Present study
pCB496	Amp <sup>R</sup> ; pCB483-based plasmid expressing Jmjd6 fused to the N-terminal half of eYFP (amino acids 1-154) (Jmjd6-YN) from the P <sub>CMV</sub> promoter.	Present study
pCB497	Amp <sup>R</sup> ; pCB484-based plasmid expressing Jmjd6 fused to the C-terminal half of eYFP (amino acids 154-238) (Jmjd6-YC) from the P <sub>CMV</sub> promoter.	Present study

pCB500	Amp <sup>R</sup> ; pcDNA-Neo-based plasmid expressing C-terminally triple flag-tagged Jmjd6 <sup>N277A</sup> under the control of the mammalian P <sub>CMV</sub> promoter.	Present study
pCB501	Amp <sup>R</sup> ; pcDNA-Neo-based plasmid expressing C-terminally triple flag-tagged Jmjd6 <sup>1-334</sup> under the control of the mammalian P <sub>CMV</sub> promoter.	Present study
pCB502	Amp <sup>R</sup> ; pcDNA-Neo-based plasmid expressing C-terminally triple flag-tagged Jmjd6 <sup>1-290</sup> under the control of the mammalian P <sub>CMV</sub> promoter.	Present study
pCB531	Amp <sup>R</sup> ; pACT2-based plasmid encoding Gal4-AD fused to <sup>ha</sup> Liat1 <sup>(41-228)</sup> under the control of the yeast P <sub>ADHI</sub> promoter.	(2)

**Supplemental Table S2.** Primers used in this study

<b>Primer</b>	<b>Primer's sequence (5' to 3')</b>
CB200F	GATCGCTAGCGCCACCATGTACCCATACGATGTTCTGAC
CB443F	GATCAAGCTTGCCACCATGGTGAGCAAGGGCGAGG
CB444R	GATCGGTACCAGTAGCAATCGATCGCATGATATAGACGTTGTGGCTG
CB445F	GATCAAGCTTGCCACCATGGCCGACAAGCAGAAGAACGGC
CB446R	GATCGGTACCAGTAGCAATCGATCGCTTGTACAGCTCGTCCATGCC
CB447F	GATCTCTAGACGATCGATTGCTACAATGGTGAGCAAGGGCGAGG
CB448R	GATCGGGCCCTCACATGATATAGACGTTGTGGCTG
CB449F	GATCTCTAGACGATCGATTGCTACAATGGCCGACAAGCAGAAGAACGGC
CB450R	GATCGGGCCCTCACTTGTACAGCTCGTCCATGCC
CB451F	GATCGAATTCTGATGGCCTCGGTGGTGAATAC
CB452R	GATCTCTAGATCAGTGTCTGAACAGCAGCATCC
CB453F	GATCAAGCTTGCGCCATGGCCTCGGTGGTGAATAC
CB454R	GATCCTCGAGGTGTCTGAACAGCAGCATCC
CB455F	GATCGAATTCTGATGGCCGGCCGTGGTGGG
CB456R	GATCTCTAGATCACTCTGCTACAGTGGTGGCTAATTCTGGG
CB457F	GATCAAGCTTGCGCGATGGCCGGCCGTGGTGGG
CB458R	GATCCTCGAGCTCTGCTACAGTGGTGGCTAATTCTGGG
CB459F	GATCGGTACCATGAACCACAAGAGCAAGAAGCGC
CB460R	GATCTCTAGATCACCTGGAGGAGCTGCGCTC
CB461F	GATCAAGCTTGGCACCATGAACCACAAGAGCAAGAAGCGC
CB462R	GATCTCTAGACCTGGAGGAGCTGCGCTC
CB475F	GTTGTCCTCGCCCTTGACACCACC
CB476R	ATGCCACCATCCCCCTGGTACAAAGAC
CB477F	TCCACAGGCATTGCCTCTGAC
CB478R	CTCCTGGAGGTCAACTGCGTC
CB479F	AGCACCAACTCCCTGTTGTG
CB480R	GCTGGCAAAGTTCTGGGTGAT
AA01F	GCGCGGAAGGCGGAGC
AA02R	ACCATACTCCGCCGACCGG
AA03F	ACTAAAGGATCGGGCAAGGGCGAC

AA04R CACCTTCCGTTTGGCCAGCTCG  
AA05R ATCGGTACCGAATAGGGAAGGGTTTGCCTATTTTCCTCTTTGTCTCTGGGC  
JD10 CACCGTGAATCGGAGAAAACGGTAC  
JD11 AAACGTACCGTTTTCTCCGATTCAC  
JD12 CACCGGTCGGGGTGAAGCCCTTGA  
JD13 AAACTCAAGGGCTTCCACCCCGACC

## References

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