

REAGENT or RESOURCE	SOURCE	IDENTIFIER
Antibodies		
GFP conjugated to horseradish peroxidase	MBL	598-7; RRID:AB_10597267
α -tubulin conjugated to horseradish peroxidase	Proteintech	HRP-66031; RRID:AB_2687491
HSP70	Proteintech	10995-1-AP; RRID:AB_2264230
Secondary rabbit horseradish peroxidase	Jackson ImmunoResearch	111-035-144; RRID:AB_2307391
Chemicals, Peptides, and Recombinant Proteins		
Dulbecco's Modified Eagle Medium	Sigma-Aldrich	D5796
Fetal bovine serum	Thermo Fisher	12676029
Penicillin G	Fujifilm Wako Chemicals	168-23191
Streptomycin	Fujifilm Wako Chemicals	168-23191
salmon sperm DNA	BioDynamics Laboratory Inc.	F012
Polyethyleneimine	Fujifilm Wako Chemicals	043896
Lipofectamine RNAi MAX	Thermo Fisher	13778150
Protease inhibitor cocktail	Sigma-Aldrich	P8340
Ni-NTA agarose beads	Fujifilm Wako Chemicals	143-09763
Biotin	Fujifilm Wako Chemicals	029-08713
Amicon Ultra-10	Merck	UFC801024
ePAGEL (5-20% gradient gel)	ATTO	E-R520L
ePAGEL (12.5% gel)	ATTO	E-R12.5L
PrimeSTAR HS DNA polymerase	TaKaRa	R010A
SYBR Gold	Thermo Fisher	S11494
Propidium iodide	Sigma-Aldrich	P4864
Benzonase	Sigma-Aldrich	E1014
CanGet Signal Immunoreaction Enhancer Solution 1	TOYOBO	NKB-201
DRAQ7	BioStatus	DR71000
Coomassie brilliant blue R-250	Fujifilm Wako Chemicals	031-17922
HEPES	Fujifilm Wako Chemicals	342-01375
Tris base	Fujifilm Wako Chemicals	207-06275
Potassium chloride	Fujifilm Wako Chemicals	169-03542
Sodium chloride	Fujifilm Wako Chemicals	191-01665
Lithium chloride	Fujifilm Wako Chemicals	123-01162
Magnesium chloride	Fujifilm Wako Chemicals	133-00161
1,6-Hexanediol	Tokyo Chemical Industry Co., Ltd.	H0099
Experimental Models: Cell Lines		
Neuro-2a	ATCC	CCL-131
Flp-In T-REx 293	Thermo Fisher	R78007
Critical Commercial Assays		
Strep-Tactin XT Superflow suspension	Zymo Research	2-4031-005
Silver stain kit	Cosmo Bio	423413
RNeasy Mini Kit	QIAGEN	74104
Mir-X miRNA First-Strand Synthesis Kit	TaKaRa	638315
QuantiFluor RNA system	Promega	E3310
Agilent HS RNA kit	Agilent Technologies	DNF-472
MGEasy RNA Directional Library Prep Set	MGI Tech Co., Ltd.	1000006386
Qubit dsDNA Quantification Assay Kits	Thermo Fisher	Q32851
dsDNA 915 reagent kit	Agilent Technologies	DNF-915
MGEasy Circularization kit	MGI Tech Co., Ltd.	1000005259
DNBSEQ-G400RS high-throughput sequencing kit	MGI Tech Co., Ltd.	1000016946
Oligonucleotides		
Polyhistidine and Strep-tag sense oligonucleotide for GFP-TDP43 5'TGT ACA GTC ACC ATC ATC ACC ATC ACT GGA GCC ACC CGC AGT TCG AAA AAT AAG CGG CCG C3'	This paper	N/A
Polyhistidine and Strep-tag antisense oligonucleotide for GFP-TDP43 5'GCG GCC GCT TAT TTT TCG AAC TGC GGG TGG CTC CAG TGA TGG TGA TGA TGG TGA CTG TAC A3'	This paper	N/A
Polyhistidine and Strep-tag sense oligonucleotide for GFP-TDP25 and GFP monomers 5'GCT AGC CAC CAT GCA CCA TCA TCA CCA TCA CTG GAG CCA CCC GCA GTT CGA AAA ACT ACC GGT3'	This paper	N/A
Polyhistidine and Strep-tag antisense oligonucleotide for GFP-TDP25 and GFP monomers 5'ACC GGT AGT TTT TCG AAC TGC GGG TGG CTC CAG TGA TGG TGA TGA TGG TGC ATG GTG GCT AGC3'	This paper	N/A
AlexaFluor647-labeled G4 RNA 5'GGG GCC GGG GCC GGG GCC GGG GCC3'	This paper	N/A
AlexaFluor647-labeled A4 RNA 5'AAA AUU AAA AUU AAA AUU AAA AUU3'	This paper	N/A
AlexaFluor647-labeled UG RNA 5'UGU GUG UGU GUG UGU GUG UGU GUG3'	This paper	N/A
AlexaFluor647-labeled G2 RNA 5'GGG GCC GGG GCC3'	This paper	N/A
AlexaFluor647-labeled A2 RNA 5'AAA AUU AAA AUU3'	This paper	N/A
G4 RNA 5'GGG GCC GGG GCC GGG GCC GGG GCC3'	This paper	N/A
A4 RNA 5'AAA AUU AAA AUU AAA AUU AAA AUU3'	This paper	N/A

Sense siRNA against the Renilla luciferase mRNA 5'GCC AAG AAG UUU CCU AAU ATT3'	This paper	N/A
Antisense siRNA against the Renilla luciferase mRNA 5'UUAU UAG GAA ACU UCU UGG CTT A3'	This paper	N/A
Sense oligonucleotide for M13N 5'GAT CCC CGT AAA ACG ACG GCC AGT GAG CTC ACC TGT GTG AAA TTG TTA TCC GCT CTT TTT A3'	This paper	N/A
Antisense oligonucleotide for M13N 5'AGC TTA AAA AGA GCG GAT AAC AAT TTC ACA CAG GTG AGC TCA CTG GCC GTC GTT TTA CGG G3'	This paper	N/A
Sense oligonucleotide for M13-G4 5'GAT CCC CGT AAA ACG ACG GCC AGT GGG GCC GGG GCC GGG GCC GGG GCC GAG CTC ACC TGT GTG AAA TTG TTA TCC GCT CTT TTT A3'	This paper	N/A
Antisense oligonucleotide for M13-G4 5'AGC TTA AAA AGA GCG GAT AAC AAT TTC ACA CAG GTG AGC TCG GCC CCG GCC CCG GCC CCG GCC CCA CTG GCC GTC GTT TTA CGG G3'	This paper	N/A
Sense oligonucleotide for M13-A4 5'GAT CCC CGT AAA ACG ACG GCC AGT AAA ATT AAA ATT AAA ATT AAA ATT GAG CTC ACC TGT GTG AAA TTG TTA TCC GCT CTT TTT A3'	This paper	N/A
Antisense oligonucleotide for M13-A4 5'AGC TTA AAA AGA GCG GAT AAC AAT TTC ACA CAG GTG AGC TCA ATT TTA ATT TTA ATT TTA ATT TTA CTG GCC GTC GTT TTA CGG G3'	This paper	N/A
Sense oligonucleotide for M13-G2 5'GAT CCC CGT AAA ACG ACG GCC AGT GGG GCC GGG GCC GAG CTC ACC TGT GTG AAA TTG TTA TCC GCT CTT TTT A3'	This paper	N/A
Antisense oligonucleotide for M13-G4 5'AGC TTA AAA AGA GCG GAT AAC AAT TTC ACA CAG GTG AGC TCG GCC CCG GCC CCA CTG GCC GTC GTT TTA CGG G3'	This paper	N/A
Sense oligonucleotide for M13-A2 5'GAT CCC CGT AAA ACG ACG GCC AGT AAA ATT AAA ATT GAG CTC ACC TGT GTG AAA TTG TTA TCC GCT CTT TTT A3'	This paper	N/A
Antisense oligonucleotide for M13-A2 5'AGC TTA AAA AGA GCG GAT AAC AAT TTC ACA CAG GTG AGC TCA ATT TTA ATT TTA CTG GCC GTC GTT TTA CGG G3'	This paper	N/A
M13 Forward primer 5'GTA AAA CGA CGG CCA GT3'	This paper	N/A
M13 Reverse primer 5'GAG CGG ATA ACA ATT TCA CAC AGG3'	This paper	N/A
ATTO647N-λDNA-F 5'GAT GAG TTC GTG TCC GTA CAA CT3'	Sasaki A. et al. Sci. Rep. 5 (2015) 14428	N/A
ATTO488-λDNA-R 5'GGT TAT CGA AAT CAG CCA CAG CG3'	Sasaki A. et al. Sci. Rep. 5 (2015) 14428	N/A

Recombinant DNA

pGFP-TDP25	Kitamura A. et al., Sci. Rep. 9 (2016) 19230	
pTDP43CS-GFP	This paper; referred on Shodai A. et al., J. Bio. Chem. 288 (2013) 14886-14905	
pGFP-F220	Kitamura A. et al., Commun. Biol. 7 (2024) 743	
pGFP-C274	Kitamura A. et al., Sci. Rep. 9 (2016) 19230	
pmeGFP-N1	Kitamura A. et al., Sci. Rep. 9 (2016) 19230	
pHSP70-GFP	This paper; modified from Kitamura A. et al., Cell Stress Chap. 23 (2018) 1177-1183	
pEYFP-Actin	Takara Bio Inc.	6902-1
pEGFP-Tub	Takara Bio Inc.	6117-1
pCMV3-PC-GFPspark	Sino Biological Japan Inc.	HG15615-ACG
pSUPERIOR.neo	OligoEngine, Inc.	VEC-IND-0004

Software and Algorithms

Carl Zeiss ZEN software	Carl Zeiss	
Fiji-ImageJ software	Fiji team	https://fiji.sc/
Microsoft Excel software	Microsoft	