Joung Lab REAL Assembly TALEN Kit

Description:

The Joung Lab at Massachusetts General Hospital has developed a rapid and simple platform for engineering TALENs of any desired length, referred to as the REAL (Restriction Enzyme And Ligation) assembly method (Sander et al., Nat Biotechnol. 2011). REAL uses standard restriction enzyme digestion and ligation reactions to assemble TALE repeat arrays and does not require specialized expertise or multi-fragment Golden Gate reactions. The platform is based on a particular architectural framework that has yielded TALENs which function efficiently in C. elegans, zebrafish, rats, and human somatic and pluripotent stem cells.

REAL utilizes a set of 28 plasmids each encoding a single TALE repeat domain and flanked by restriction sites used for ligation into longer arrays. DNA fragments encoding TALE repeat arrays can be easily transferred by simple cloning into one of four different TALEN expression vectors (each possessing one of the four different carboxy-terminal 0.5 TALE repeat domains).

This kit provides the 28 individual TALE repeat domain plasmids and the 4 different TALEN expression vectors. With this kit, users can assemble any combination of TALE repeats into arrays of any desired length using the REAL assembly method.

Detailed information can be found at:
www.addgene.org/talengineering

Handling and Storage: Store glycerol stocks at -80°C and minimize freeze-thaw cycles. To access a plasmid, keep the plate on dry ice to prevent thawing. Using a sterile pipette tip, puncture the seal above an individual well and spread a portion of the glycerol stock onto an agar plate. To patch the hole, use sterile tape or a portion of a fresh aluminum seal.

Note: These plasmid constructs are being distributed to non-profit institutions for the purpose of basic research.

Please contact Addgene at help@addgene.org with any questions.

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Plate Map

	1	2	3	4	5	6	7	8	9	10	11	12
A	TAL006	TAL007	TAL009	TAL010	TAL011	TAL012	TAL014	TAL015	TAL016	TAL017	TAL019	TAL020
B	TAL021	TAL022	TAL024	TAL025	TAL026	TAL027	TAL029	TAL030	TAL031	TAL032	TAL034	TAL035
C	TAL036	TAL037	TAL039	TAL040	JDS70	JDS71	JDS74	JDS78				
D												
E												
F												
G												
H												

Instructions: To access a plasmid, keep the plate on dry ice to prevent thawing. Using a sterile pipette tip, puncture the seal above an individual well and spread a portion of the glycerol stock onto an agar plate. To patch the hole, use sterile tape or a portion of a fresh aluminum seal.

Please visit www.addgene.org/talengineering/TALENkit for plasmid information.

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How to Cite your Addgene Plasmids in Future Publications (Save for reference)

These plasmids were created by your colleagues. Please acknowledge the Principal Investigator, cite the article in which they were created, and include Addgene in the Materials and Methods of your future publications.

Information pertinent to your requested plasmids:

Principal Investigators: Keith Joung

Article Reference: **Targeted gene disruption in somatic zebrafish cells using engineered TALENs.** Sanders JD, Cade L, Khayter C, Reyon D, Peterson RT, Joung KJ, Yeh JRJ. Nat Biotechnol. 2011 Aug 5;29(8):697-8. (Pubmed ID: 21822241)

Addgene: Joung Lab REAL Assembly TALEN Kit

If you have any questions about how to cite these plasmids, please contact Addgene at help@addgene.org or call (617) 225-9000.

Best wishes for many successful publications!

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