

# Resource Summary Report

Generated by [RRID](#) on Aug 21, 2026

## dio2\_R (OZ570)

RRID:Addgene\_33384

Type: Plasmid

### Proper Citation

RRID:Addgene\_33384

### Plasmid Information

**URL:** <http://www.addgene.org/33384>

**Proper Citation:** RRID:Addgene\_33384

**Insert Name:** Zinc finger array targeting dio2

**Organism:** Danio rerio

**Bacterial Resistance:** Kanamycin

**Defining Citation:** [PMID:18657511](#)

**Vector Backbone Description:** Backbone Size:5493; Vector Backbone:MG414; Vector Types:Zebrafish Targeting; Bacterial Resistance:Kanamycin

**Comments:** This plasmid encodes a zinc finger array targeting half of a target sequence in the zebrafish gene dio2. Please note that this plasmid does NOT contain the dio2 sequence. Users must order the complementary plasmid dio2\_L (OZ569) [Addgene plasmid 33383] in order to create a zinc finger nuclease (ZFN) pair to introduce targeted mutations into this specific zebrafish gene. Users will also need to clone the zinc finger (ZF) insert of this plasmid into a zinc finger nuclease (ZFN) vector to express a FOKI fusion product. Examples of possible ZFN expression vectors that can be used are: pST1374 (Addgene plasmid 13426), pMLM290/292 (Addgene plasmids 21872 & 21873), pMLM800/802 (Addgene plasmids 27202 & 27203). The difference between pMLM800/802 and pMLM290/292 is the length of the "spacer" sequence in the full ZFN target site. If the spacer is 7 bp, scientists should use pMLM800/802. If the spacer is 5 or 6 bps, scientists should use pMLM290/292. pMLM290/292 is identical to pST1374 except that it harbors two mutations in the FokI nuclease domain (Q486E, I499L; aka the "- mutation see Miller et al., Nat. Biotech 2007, PMID 17603475) which confers heterodimeric behavior on these domains This zinc finger array was tested for binding activity to the sequence 5'-TAAGGTGGT-3' in a bacterial two hybrid assay, and resulted in 8.35 fold activation. However, this array has not yet been tested for activity as a zinc finger nuclease (i.e. for its ability to induce mutations at the intended locus). Scientists using this

zinc finger array in a publication should notify [zebrafishzfs@zincfingers.org](mailto:zebrafishzfs@zincfingers.org) and acknowledge NIH grant number R01 GM088040 in the publication. Other Articles: "Oligomerized pool engineering (OPEN): an 'open-source' protocol for making customized zinc-finger arrays." Maeder ML et al. (Nat Protoc. 2009 Sept 17. 4(10):1471-1501. Pubmed ID: 19798082) "Targeted mutagenesis in zebrafish using customized zinc-finger nucleases." Foley JE et al. (Nat Protoc. 2009 Dec 3. 4(12):1855-1867. Pubmed ID: 20010934)

**Plasmid Name:** dio2\_R (OZ570)

**Record Creation Time:** 20220422T222145+0000

**Record Last Update:** 20260815T081355+0000

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## Ratings and Alerts

No rating or validation information has been found for dio2\_R (OZ570).

No alerts have been found for dio2\_R (OZ570).

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## Data and Source Information

**Source:** [Addgene](#)

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## Usage and Citation Metrics

We have not found any literature mentions for this resource.