Resource Summary Report

Generated by RRID on Sep 1, 2026

LEGO-pDHS-AP1x6-GM55

RRID:Addgene_217416
Type: Plasmid

Proper Citation

RRID:Addgene_217416

Plasmid Information

URL: http://www.addgene.org/217416

Proper Citation: RRID:Addgene_217416

Insert Name: Luciferase, GFP

Organism: Homo sapiens

Bacterial Resistance: Ampicillin

Vector Backbone Description: Backbone Marker:Boris Fehse (Addgene #27358); Vector Backbone:LeGO-iG; Vector Types:Mammalian Expression, Lentiviral, Luciferase; Bacterial Resistance:Ampicillin

Comments: This is an inducible lentiviral luciferase expression vector that has 6 RAS/MAPK-inducible AP-1 sites driving transcription from the minimal CSF2 promoter, plus a chromatin priming element from the IL3 gene that can potentially diminish chromatin silencing effects. LEGO-pDHS-AP1x6-GM55 was constructed from LEGO-AP1x6-GM55 by inserting into the XbaI site a 274 bp PCR-generated fragment of a DNA segment located 10 kb upstream of the human IL3 gene that maintains open chromatin at a constitutive DNaseI Hypersensitive Site in myeloid cells. LEGO-AP1x6-GM55 was constructed from LeGO-iG (Weber et al, 2008) (Addgene #27358) by replacing a NotI/XbaI fragment containing the U6 and SFFV promoters with a fragment from the plasmid pAP1-3 (Addgene #71258) that has 3 copies of the MMP3 gene AP-1 site in front of human CSF2 -55 to +28 minimal promoter driving expression of the Luc+ firefly luciferase gene originating from the plasmid pGL3 (Promega), and then duplicating the array of 3 AP-1 sites. The luciferase gene is linked to an IRES that in principle supports co-expression of luciferase and EGFP. The insert has 2 copies of the SV40 transcription termination/polyadenylation signal upstream of the multiple cloning site, which blocks background read-through transcription originating in the vector backbone, which itself can be substantial (Bert et al, 2000). The inserted luciferase gene and SV40 polyA site sequences originate from the plasmid pXPG (Bert et al, 2000) (Addgene #71248). The priming element (pDHS) encompasses RUNX1 and ETS1 binding sites and resembles

sites that prime genes for rapid activation in T cells (Bevington et al, 2016). References: Bert et al. Plasmid. 2000 Sep;44(2):173-82. PMID 10964627. Weber et al. Mol Ther. 2008 Apr. 16(4):698-706. PMID 18362927. Bevington et al. Bioessays 2016 Dec 27. doi: 10.1002/bies.201600184. PMID 28026028.

Plasmid Name: LEGO-pDHS-AP1x6-GM55

Record Creation Time: 20240801T080651+0000

Record Last Update: 20260829T082055+0000

Ratings and Alerts

No rating or validation information has been found for LEGO-pDHS-AP1x6-GM55.

No alerts have been found for LEGO-pDHS-AP1x6-GM55.

Data and Source Information

Source: Addgene

Usage and Citation Metrics

We have not found any literature mentions for this resource.