

Resource Summary Report

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mPiezo2-CMV-Sport6

RRID:Addgene_81073

Type: Plasmid

Proper Citation

RRID:Addgene_81073

Plasmid Information

URL: <http://www.addgene.org/81073>

Proper Citation: RRID:Addgene_81073

Insert Name: Piezo2 (please see depositor comments below)

Organism: Mus musculus

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:26008989](#)

Vector Backbone Description: Vector Backbone:pCMV-Sport6; Vector Types:Mammalian Expression; Bacterial Resistance:Ampicillin

Comments: Please note- when compared to the Piezo2 reference sequence NM_001039485.4, the insert in this plasmid contains mutation D1896E and deletion of residues V1897 and E1898. Piezo2 was amplified out of mouse DRGs. The variant that is present in DRGs when it was cloned is missing 6 base pairs. Here is the link to the original manuscript: <http://science.sciencemag.org/content/330/6000/55.full> The reported protein sequence is in the supplementary data. The plasmid functions as described. <http://science.sciencemag.org/content/330/6000/55.full> The depositor recommends the following protocol for researchers having issues growing or isolating plasmid 81073 (mPiezo2-CMV-Sport6): For Piezo2- inoculate culture from glycerol stock into 4-5mls of LB media. Grow the culture at 37 deg for 4-5 hrs and then transfer the culture to larger volumes of media (about 100-150mls) and grow overnight at 37 deg. Usual maxi prep yields are low in the range of 50-100ng/ul. We digest verify the preps by digesting with KpnI and NotI to give 8.2kb insert and 4.4kb vector bands or with KpnI and SpeI to give 2 bands with sizes 8.6 kb and 4.2 kb. When handling glycerol stocks for Piezo2, always re-streak and pick single clones. Never inoculate the glycerol stock into an overnight culture. Our lab has had issues with clones that grow with amp resistance but after digestion, show a prominent ~4 kb single band. After mini-prep or maxi-prep, always confirm the DNA product by restriction digest. We digest with KpnI and SpeI and this leads to 2 bands with sizes 8.6 kb and 4.2 kb. We digest verify every time we maxi prep. For our

maxi preps, we notice that our yields are low - sometimes ~ 50-100 ng/ul when eluting in 1 ml from ~150 ml of culture. Alternatively, transform your DNA into XL-10 gold cells. Plate and grow for 3-4 days at 25C. Select single colonies and inoculate 200-300 mL of media. Grow with shaking at 25C for 3-4 days. Maxiprep the culture as normal, digest DNA to verify as above.

Plasmid Name: mPiezo2-CMV-Sport6

Record Creation Time: 20220422T222528+0000

Record Last Update: 20260815T082043+0000

Ratings and Alerts

No rating or validation information has been found for mPiezo2-CMV-Sport6.

No alerts have been found for mPiezo2-CMV-Sport6.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 7 mentions in open access literature.

Listed below are recent publications. The full list is available at [RRID](#) .

Oba R, et al. (2025) Upregulation of Piezo2 and increased extracellular matrix protein in diabetic kidney disease mice. Hypertension research : official journal of the Japanese Society of Hypertension, 48(4), 1514.

Lim S, et al. (2025) Molecular basis for a pore block of Tentonin 3 expressed in HEK293 cells by a conopeptide, NMB-1. British journal of pharmacology.

Xie MX, et al. (2024) Endophilin A2 controls touch and mechanical allodynia via kinesin-mediated Piezo2 trafficking. Military Medical Research, 11(1), 17.

Zhang X, et al. (2024) TMC7 functions as a suppressor of Piezo2 in primary sensory neurons blunting peripheral mechanotransduction. Cell reports, 43(4), 114014.

Duan M, et al. (2023) Potentiation of PIEZO2 mechanically-activated currents in sensory neurons mediates vincristine-induced mechanical hypersensitivity. Acta pharmaceutica Sinica. B, 13(8), 3365.

Parsonage G, et al. (2023) Improved PIEZO1 agonism through 4-benzoic acid modification of Yoda1. British journal of pharmacology, 180(16), 2039.

Huo L, et al. (2021) Piezo2 channel in nodose ganglia neurons is essential in controlling hypertension in a pathway regulated directly by Nedd4-2. Pharmacological research, 164, 105391.