

Resource Summary Report

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pcDNA3 mHIF-1? MYC (P402A/P577A/N813A)

RRID:Addgene_44028

Type: Plasmid

Proper Citation

RRID:Addgene_44028

Plasmid Information

URL: <http://www.addgene.org/44028>

Proper Citation: RRID:Addgene_44028

Insert Name: mHIF-1? (P402A/P577A/N813A)

Organism: Mus musculus

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:17804822](#)

Vector Backbone Description: Backbone Marker:Invitrogen; Backbone Size:5446; Vector Backbone:pcDNA3; Vector Types:Mammalian Expression; Bacterial Resistance:Ampicillin

Comments: This plasmid encodes an oxygen-regulation insensitive (normoxia-stable and active) full-length murine HIF-1?. Full-length murine HIF-1? cDNA was generated by reverse transcription-PCR and inserted into a pcDNA3 expression vector by using primers incorporated with restriction sites. A 10-amino-acid c-myc tag was further inserted at the C terminus of the HIF-1? cDNAs by using a Pfu-PCR-based protocol. The same Pfu-PCR protocol was then used to change residues Proline 402, Proline 577 and Asparagine 813 to alanines. The newly constructed plasmid was sequenced to confirm encoding of the correct protein. Alternate plasmid names: HIF-1? triple mutant (TM); pcDNA3 HIF-1? TM

Plasmid Name: pcDNA3 mHIF-1? MYC (P402A/P577A/N813A)

Relevant Mutation: P402A, P577A, N813A

Record Creation Time: 20220422T222228+0000

Record Last Update: 20260815T081512+0000

Ratings and Alerts

No rating or validation information has been found for pcDNA3 mHIF-1? MYC (P402A/P577A/N813A).

No alerts have been found for pcDNA3 mHIF-1? MYC (P402A/P577A/N813A).

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 16 mentions in open access literature.

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

Jia Y, et al. (2025) Melanoma bone metastasis-induced osteocyte ferroptosis via the HIF1?-HMOX1 axis. Bone research, 13(1), 9.

Seo R, et al. (2025) Cancer-intrinsic Cxcl5 orchestrates a global metabolic reprogramming for resistance to oxidative cell death in 3D. Cell death and differentiation, 32(7), 1200.

Li C, et al. (2025) Lactylation modification of HIF-1? enhances its stability by blocking VHL recognition. Cell communication and signaling : CCS, 23(1), 364.

Geiger F, et al. (2025) HIF1 activity in photoreceptors drives type 3 neovascularization and retinal atrophy in a new mouse model of age-related macular degeneration. Cell death & disease, 16(1), 687.

Li M, et al. (2024) PHD2 safeguards modest mesendoderm development. Communications biology, 7(1), 1100.

Otero-Albiol D, et al. (2024) Hypoxia-induced immortalization of primary cells depends on Tfcpl1 expression. Cell death & disease, 15(2), 177.

Linnerbauer M, et al. (2024) The astrocyte-produced growth factor HB-EGF limits autoimmune CNS pathology. Nature immunology, 25(3), 432.

Baldominos P, et al. (2022) Quiescent cancer cells resist T cell attack by forming an immunosuppressive niche. Cell, 185(10), 1694.

Zhao L, et al. (2021) Obesity Impairs Embryonic Myogenesis by Enhancing BMP Signaling within the Dermomyotome. Advanced science (Weinheim, Baden-Wurttemberg, Germany), 8(22), e2102157.

Cheng WC, et al. (2019) Uncoupling protein 2 reprograms the tumor microenvironment to support the anti-tumor immune cycle. Nature immunology, 20(2), 206.

Browe DC, et al. (2019) Hypoxia Activates the PTHrP -MEF2C Pathway to Attenuate Hypertrophy in Mesenchymal Stem Cell Derived Cartilage. Scientific reports, 9(1), 13274.

López-Rodríguez DM, et al. (2019) A role of hypoxia-inducible factor 1 alpha in Murine Gammaherpesvirus 68 (MHV68) lytic replication and reactivation from latency. PLoS pathogens, 15(12), e1008192.

Xie L, et al. (2018) Transient HIF2A inhibition promotes satellite cell proliferation and muscle regeneration. The Journal of clinical investigation, 128(6), 2339.

Gu YF, et al. (2017) Modeling Renal Cell Carcinoma in Mice: Bap1 and Pbrm1 Inactivation Drive Tumor Grade. Cancer discovery, 7(8), 900.

Sharma BK, et al. (2016) Inhibitor of differentiation 1 transcription factor promotes metabolic reprogramming in hepatocellular carcinoma cells. FASEB journal : official publication of the Federation of American Societies for Experimental Biology, 30(1), 262.

Brooks DL, et al. (2016) ITGA6 is directly regulated by hypoxia-inducible factors and enriches for cancer stem cell activity and invasion in metastatic breast cancer models. Molecular cancer, 15, 26.