

Resource Summary Report

Generated by [RRID](#) on Aug 17, 2026

5HRE/GFP

RRID:Addgene_46926

Type: Plasmid

Proper Citation

RRID:Addgene_46926

Plasmid Information

URL: <http://www.addgene.org/46926>

Proper Citation: RRID:Addgene_46926

Insert Name: 5X HRE of VEGF

Organism: Homo sapiens

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:11774035](#)

Vector Backbone Description: Backbone Marker:Invitrogen; Backbone Size:5500; Vector Backbone:pEF/myc/cyto; Vector Types:Mammalian Expression; Bacterial Resistance:Ampicillin

Comments: The 35-bp human VEGF HRE sequence is: CCACAGTGCATACGTGGGCTCCAACAGGTCCTCTT The d2EGFP fragment was amplified from a Clontech (Palo Alto, CA) vector and encodes a destabilized red- shifted variant of wild-type GFP with an excitation maximum of 488 nm, an emission maximum of 507 nm, and a half-life of approximately 2 hours.

Plasmid Name: 5HRE/GFP

Relevant Mutation: five copies of a 35-bp fragment from the hypoxia-responsive element (HRE) of the human VEGF gene and a human cytomegalovirus minimal promoter

Record Creation Time: 20220422T222242+0000

Record Last Update: 20260815T081537+0000

Ratings and Alerts

No rating or validation information has been found for 5HRE/GFP.

No alerts have been found for 5HRE/GFP.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 24 mentions in open access literature.

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

Rendina BP, et al. (2025) Post-transcriptional control of HIF-1 α by MBNL1 restrains hypoxia-driven stemness in GBM. *Neoplasia* (New York, N.Y.), 72, 101262.

Burban A, et al. (2025) Exploiting metabolic vulnerability in glioblastoma using a brain-penetrant drug with a safe profile. *EMBO molecular medicine*, 17(3), 469.

Matsuoka T, et al. (2024) Newly developed preclinical models reveal broad-spectrum CDK inhibitors as potent drugs for CRPC exhibiting primary resistance to enzalutamide. *Cancer science*, 115(1), 283.

Lampson BL, et al. (2024) Positive selection CRISPR screens reveal a druggable pocket in an oligosaccharyltransferase required for inflammatory signaling to NF- κ B. *Cell*, 187(9), 2209.

Sitte ZR, et al. (2023) Selecting the appropriate indirect viability assay for 3D paper-based cultures: a data-driven study. *The Analyst*, 148(10), 2245.

Samuel T, et al. (2023) Quantitative intravital imaging for real-time monitoring of pancreatic tumor cell hypoxia and stroma in an orthotopic mouse model. *Science advances*, 9(23), eade8672.

Zou J, et al. (2023) Neddylation is required for perinatal cardiac development through stimulation of metabolic maturation. *Cell reports*, 42(1), 112018.

Zeh N, et al. (2022) Exploring synthetic biology for the development of a sensor cell line for automated bioprocess control. *Scientific reports*, 12(1), 2268.

Mallet C, et al. (2022) Hypoxia and HIF-1 Trigger Marek's Disease Virus Reactivation in Lymphoma-Derived Latently Infected T Lymphocytes. *Journal of virology*, 96(5), e0142721.

Martinez CA, et al. (2022) Intermittent hypoxia enhances the expression of hypoxia inducible factor HIF1A through histone demethylation. *The Journal of biological chemistry*, 298(11), 102536.

Zeh N, et al. (2021) Cell line development for continuous high cell density biomanufacturing: Exploiting hypoxia for improved productivity. *Metabolic engineering communications*, 13, e00181.

Janská L, et al. (2021) The MEMIC is an ex vivo system to model the complexity of the tumor microenvironment. *Disease models & mechanisms*, 14(8).

Park JH, et al. (2020) Isolinderalactone suppresses human glioblastoma growth and angiogenic activity in 3D microfluidic chip and in vivo mouse models. *Cancer letters*, 478, 71.

Tan HF, et al. (2020) The focal adhesion protein kindlin-2 controls mitotic spindle assembly by inhibiting histone deacetylase 6 and maintaining α -tubulin acetylation. *The Journal of biological chemistry*, 295(18), 5928.

Boyce MW, et al. (2020) Generating linear oxygen gradients across 3D cell cultures with block-layered oxygen controlled chips (BLOCCs). *Analytical methods : advancing methods and applications*, 12(1), 18.

Ayuso JM, et al. (2020) Microfluidic Tumor-on-a-Chip Model to Study Tumor Metabolic Vulnerability. *International journal of molecular sciences*, 21(23).

Tang HW, et al. (2020) In vivo longitudinal and multimodal imaging of hypoxia-inducible factor 1 α and angiogenesis in breast cancer. *Chinese medical journal*, 133(2), 205.

Ayuso JM, et al. (2019) Evaluating natural killer cell cytotoxicity against solid tumors using a microfluidic model. *Oncoimmunology*, 8(3), 1553477.

Kim H, et al. (2018) The hypoxic tumor microenvironment in vivo selects the cancer stem cell fate of breast cancer cells. *Breast cancer research : BCR*, 20(1), 16.

Duette G, et al. (2018) Induction of HIF-1 α by HIV-1 Infection in CD4 $^{+}$ T Cells Promotes Viral Replication and Drives Extracellular Vesicle-Mediated Inflammation. *mBio*, 9(5).