phOC-iNOS Vector

Catalogue number: 153288
Sub-type: pcDNA 3.1
Images:

Contributor

Inventor: Helen McCarthy
Institute: Queen's University Belfast
Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: phOC-iNOS Vector

Alternate name: Nitric Oxide Synthase

Class:
Conjugate:
Description: phOC-iNOS Plasmid is a human nitric oxide synthase (iNOS) transgene driven by a human osteocalcin (hOC) promoter to control inducible nitric oxide synthase (iNOS) transgene expression in hormone refractory prostate cancer (HRPC). The plasmid was originally developed as an anti-cancer therapeutic with a view to a gene therapy strategies. Studies in the literature have demonstrated that this plasmid increases iNOS protein and total nitrite levels in PC3 and DU145 cells, but not LNCaP or HT29 (McCarthy et al., 2007). The plasmid serves as a useful tool in cardiovascular studies or any physiology associated with vasodilation.
Purpose:
Parental cell:
Organism:
Tissue:
Model:
Gender:
Isotype:
Reactivity:
Selectivity:
Host:
Immunogen:
Immunogen UNIPROT ID:
Sequence:
Growth properties:
Production details:

Formulation:
Recommended controls:
Bacterial resistance:
Selectable markers:
Additional notes:

Target details

Target: Inducible Nitric Oxide Synthase

Target alternate names:

Target background:

Molecular weight:

Ic50:

Applications

Application:
Application notes: Recommended for transpormation in DH5 alpha bacterial cells iNOS gene is 4.4kb

Handling

Format:
Concentration:
Passage number:
Growth medium:
Temperature:
Atmosphere:
Volume:
Storage medium:
Storage buffer:
Storage conditions: -80° C
Shipping conditions: Dry Ice

Related tools

Related tools: pCMV-iNOS Vector

References

References: Adams et al. 2009. J Gene Med. 11(2):160-8. PMID: 19062185. ; Nitric oxide synthase gene therapy enhances the toxicity of cisplatin in cancer cells. ; Coulter et al. 2008. Gene Ther. 15(7):495-503. PMID: 18256696. ; The radiation-inducible pE9 promoter driving inducible nitric oxide synthase radiosensitizes hypoxic tumour cells to radiation. ; McCarthy et al. 2007. J Gene Med. 9(6):511-20. PMID: 17471586. ; Human osteocalcin: a strong promoter for nitric oxide synthase gene therapy, with specificity for hormone refractory prostate cancer. ; McCarthy et al. 2007. Gene Ther. 14(3):246-55. PMID: 17006546. ; p21((WAF1))-mediated transcriptional targeting of inducible nitric oxide synthase gene therapy sensitizes tumours to fractionated radiotherapy. ; Worthington et al. 2002. Gene Ther. 9(4):263-9. PMID: 11896465. ; Tumour cell radiosensitization using constitutive (CMV) and radiation inducible (WAF1) promoters to drive the iNOS gene: a novel suicide gene therapy.