



Next Generation Fluorescence Imaging

Smart Sensor Solutions

General Information

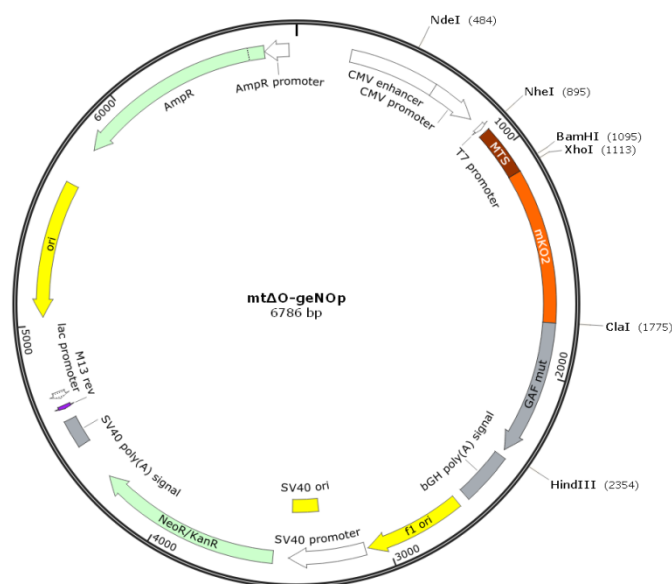
This product is non-toxic, non-contagious and is not intended for human use. The plasmid DNA in the package is synthetic and only for research and development purposes. It does not present any danger for humans, animals or the environment. The product is only for in vitro studies and is not for commercial use.

mtΔO-geNOP vector

This vector has not been completely sequenced. All provided information regarding the vector composition was compiled using the information from published literature, other sources together with partial sequences obtained by NGFI.

Vector description

mtΔO-geNOP is a mitochondrial targeted orange fluorescent-based probe serving as a negative control for the nitric oxide (NO•) sensitive sensor mtO-geNOP within the mitochondrial matrix of intact mammalian cells. In order to express mtΔO-geNOP in cells of interest, 20 µg of purified endotoxin-free plasmid DNA coding for mtΔO-geNOP is provided. The plasmid coding for mtΔO-geNOP represents a mammalian expression vector with a strong viral promoter. For plasmid amplification in E.coli ampicillin should be used. 1 – 1.5 µg DNA is required for cell transfection in a single well of a standard 6-well dish following standard transfection procedures. Usually cells express high amounts of mtΔO-geNOP 24 – 48 hours after cell transfection. Standard optical filters for OFP imaging should be used. The vector can be also used as a source of mtΔO-geNOP coding sequence.



Expression in mammalian cells

mtΔO-geNOP vector can be transfected into mammalian cells by any known transfection method. CMV promoter provides strong, constitutive mtΔO-geNOP expression in eukaryotic cells.

Propagation in E. coli

Suitable host strains for propagation in E. coli include DH5alpha, HB101, XL1-Blue, and other general purpose strains. The vector confers resistance to ampicillin (100 µg/ml) to E. coli hosts.

NOTE: For a correct negative control of mtO-geNOP, mtΔO-geNOP needs to be treated with the non-toxic iron(II) loading buffer (<http://www.ngfi.eu/product/ironii-booster-solution/>) for 20 minutes before imaging experiments.

References

Eroglu E. (2016) "Development of novel FP-based probes for live-cell imaging of nitric oxide dynamics" (<http://www.nature.com/ncomms/2016/160204/ncomms10623/pdf/ncomms10623.pdf>)