

Hypoxia Probe

Cat. # LOX-1

Precautions for use

Thank you for purchasing a Hypoxia probe LOX-1. It is recommended that users read all instructions before use.

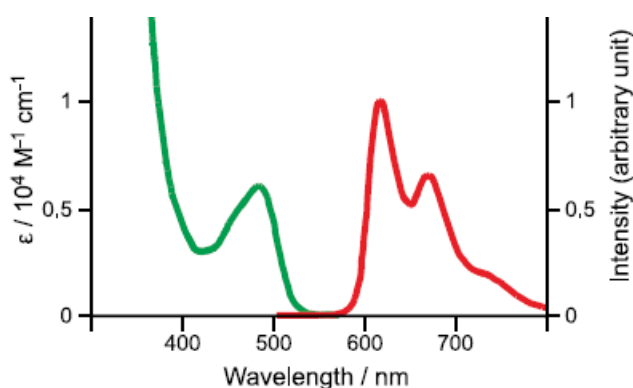
Introduction

LOX-1 is a phosphorescent light-emitting iridium complex. Phosphorescence of LOX-1 is quenched by oxygen, and is increased in response to low levels of oxygen which is detectable by a general fluorescent microscopy (red-fluorescence). LOX-1 permeates cell membrane, and it is possible to determine cellular hypoxia by red-fluorescence imaging using a general fluorescent microscopy.

Products and storage

Product	MW	Quantity	Storage
Hypoxia probe LOX-1	711.87	2 mg	room temperature protection from light

Please refer to expiration date on the label.



Phosphorescence spectra of LOX-1 (Excitation: green line, Emission: red line) ¹⁾



Example of use

LOX-1 is dissolved in DMSO to make 1 mmol/L stock solution. (LOX-1 stock solution is stored at -20°C except for use.)

100 µL of NanoCulture Medium M type (NCM-M) are added to each well for pre-incubation of NanoCulture Plate (NCP).

HT29 (colon tumor cell line) is suspended in NCM-M at a concentration of 1×10^5 cells/mL.

100 µL-aliquots of HT29 suspension are seeded to each well of NCP containing 100 µL of NCM-M (final cell concentration is 1×10^4 cells/well), and cultured at 37°C, 5%CO₂ for 6 days to form spheroids.

LOX-1 stock solution is diluted with NCM-M to prepare 4 µmol/L working solution just before use.

100 µL-aliquots of culture supernatant are gently removed.

Then, 100 µL-aliquots of LOX-1 working solution are gently added (Final concentration of LOX-1 is 2 µmol/L.).

After culturing for a day, red-phosphorescence is measured by a general fluorescent microscopy (Nikon ECLIPSE TS100, G-2A filter block: Ex 510-560, DM575, BA590).

Please see Handbook of NCP for more detail information

References

Zhang S, Hosaka M, Yoshihara T, Negishi K, Iida Y, Tobita S, Takeuchi T. Phosphorescent Light-Emitting Iridium Complexes Serve as a Hypoxia-Sensing Probe for Tumor Imaging in Living Animals. *Cancer Res.* 2010 Jun 1;70(11):4490-8.

Product warranty

All materials supplied in product pass an inspection at ORGANOGENIX, Inc. prior to shipment. However, if product you received is defective, please contact us.



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