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Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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MitoStep™

Flow Cytometry Mitochondrial Membrane Potential Assay

Reference	Size
MITO-100T	100 test

PRODUCT DESCRIPTION

Membrane potential ($\Delta\Psi$) is generated and maintained by concentration gradients of ions such as sodium, potassium, chloride, and hydrogen.

Mitochondrial $\Delta\Psi$ drives the accumulation in mitochondria of cationic dyes such as cyanines, and the mitochondrial $\Delta\Psi$ is reduced when energy metabolism is disrupted, notably in apoptosis. Changes in the mitochondrial $\Delta\Psi$ have been described during necrosis, cell cycle and apoptosis. Mitochondrial uptake of dye is a possible source of fluorescence variance.

Flow cytometry can be used to estimate membrane potential in eukaryotic cells. Methods using cyanine dyes can detect changes in $\Delta\Psi$.

PRODUCT	EXCITE (NM)	EMIT (NM)
DiICl(5)	633	658

Immunostep MitoStep uses a cationic dye DiICl(5) (1,1',3,3,3'-hexamethylindodicarbo-cyanine iodide) for the study of mitochondrial $\Delta\Psi$. During the apoptosis occurs depolarization of the membrane and as a result there is an increase in cells with less DiICl(5) fluorescence. MitoStep has been optimized for use in flow cytometry, cells stained with DiICl(5) are excited using air-cooled Helium-Neon laser emitting at 633nm, cells DiICl(5) positives emitted at 658 nm. DiICl(5) mean intensity of fluorescence decreases when cells are treated with reagents that induce apoptosis or reagents that disrupt $\Delta\Psi$ mitochondrial.

Storage buffer: DiICl(5), 500 μ lof 10 μ M in DMSO.

Storage conditions: Store in the dark at 2-8 °C. Do not use after expiration date stamped on vial. If unexpected staining is observed which cannot be explained by variations in laboratory procedures and a problem with the product is suspected, contact our Technical Services. tech@immunostep.com

RECOMMENDATIONS AND WARNINGS

DMSO is a potentially toxic. It is recommended that the user wear protective clothing, gloves, and eye/face protection in order to avoid contact with the skin and eyes.

Staining cells protocol with DiICl(5)

1. Harvest the cells after the apoptosis induction or treatment with a disrupt membrane potential reagent and wash in temperate phosphate-buffered saline (PBS).
2. Wash cells twice with temperate PBS and resuspend cells in temperate phosphate-buffered saline (PBS) at a concentration 1 x 10⁶ cells/ml.
3. Add 5 μ l of 10 μ M DiICl(5).
4. Incubate the cells at 37 °C, 5% CO₂, for 15 minutes.
5. After incubation period, add 400 μ l of PBS to each tube. Analyze by flow cytometry.

Please, refer to <http://immunostep.com/content/31-support> for technical information.

WARRANTY

Warranted only to conform to the quantity and contents stated on the label or in the product labelling at the time of delivery to the customer. Immunostep disclaims hereby other warranties. Immunostep's sole liability is limited to either the replacement of the products or refund of the purchase price.

REFERENCES

1. Howard M. Shapiro. Membrane Potential Estimation by Flow Cytometry. Methods 21, 271-279 (2000).

MANUFACTURED BY



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