

# Anti-Human Estrogen receptor $\alpha$ -163Dy

Catalog: 3163024A

Clone: D8H8

Package Size: 50 tests

Isotype: Rabbit IgG

Storage: Store product at 4°C. Do not freeze.

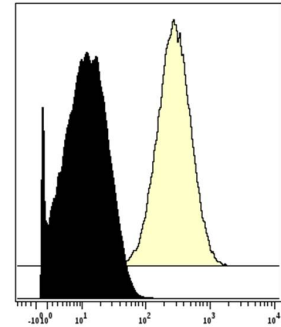
Formulation: Antibody stabilizer with 0.05% Sodium Azide

Reactivity: Human

## Technical Information

**Validation:** Each lot of conjugated antibody is quality control tested by CyTOF<sup>®</sup> analysis of stained cells using the appropriate positive and negative cell staining and/or activation controls.

**Recommended Usage:** The suggested use is 1  $\mu$ l for up to  $3 \times 10^6$  live cells in 100  $\mu$ l. It is recommended that the antibody be titrated for optimal performance for each of the desired applications.



Estrogen Receptor  $\alpha$  (D8H8)-163Dy

Human U-87 MG cells (top) and human Jurkat cells (bottom) were fixed, permeabilized, and stained with 163Dy-anti-Estrogen Receptor  $\alpha$  (D8H8). Total viable cells are displayed in analysis.

## Description

Estrogen receptor alpha (ER $\alpha$ ), a member of the steroid receptor superfamily, contains highly conserved DNA binding and ligand binding domains. Estrogens regulate proliferation and cell death and these specific actions are mediated by the two estrogen receptor (ER) subtypes, ER $\alpha$  or ER $\beta$ . The role of ER $\alpha$  in cancer cell proliferation and survival has been extensively studied in the breast and other female tissues such as the ovary, uterus and cervix. These studies demonstrate that ER $\alpha$  is a multifunctional protein; in addition to its genomic role as a transcription factor, where agonist-bound ER $\alpha$  regulates the expression of downstream genes containing estrogen-response elements (ERE), ER $\alpha$  localizes to the cell membrane via palmitoylation to direct "non-genomic" activities. At the plasma membrane, ER $\alpha$  interacts with c-Src and the regulatory subunit of PI3K, p85 $\alpha$ , to augment signaling activity through the MAPK and PI3K pathways, both drivers of growth, proliferation and survival.

## References

Bandura, D. R., et al. Mass Cytometry: Technique for Real Time Single Cell Multitarget Immunoassay Based on Inductively Coupled Plasma Time-of-Flight Mass Spectrometry. *Analytical Chemistry* 81:6813-6822, 2009.

Ornatsky, O. I., et al. Highly Multiparametric Analysis by Mass Cytometry. *J Immunol Methods* 361 (1-2):1-20, 2010.

## For technical support visit [fluidigm.com/support](http://fluidigm.com/support)

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