DVS Sciences

Product Information Sheet

Anti-Human CyclinA-158Gd

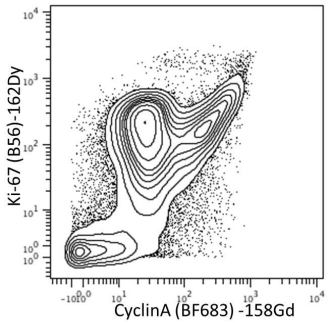
Catalog #: 3158008A
Package Size: 50 tests
Storage: Store product at 4°C. Do not freeze.
Cross Reactivity: Human

Clone: BF683
Isotype: Mouse Other
Formulation: Antibody stabilizer with 0.05% Sodium Azide

Technical Information

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

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



Human T-lymphoblasts MOLT-4 cells were fixed, permeabilized, and stained with 162Dy-anti-Ki-67 (B56) and 158Gd-anti-CyclinA (BF683).

Description

Cyclin A was the first cyclin cloned, and mammalian cells express two A-type cyclins, A1 and A2. Cyclin A1 is expressed almost exclusively in the testes, during meiosis in the male germline whereas cyclin A2 is ubiquitously expressed in all proliferating cells, and is generally considered to be the mammalian S phase cyclin. During cell cycle progression cyclin A2 is induced at the beginning of the S phase. Once induced, cyclin A2 binds and activates its catalytic partners, cyclin-dependent kinases Cdk2 and Cdk1. These cyclin A2-Cdk complexes phosphorylate critical proteins that play role in DNA synthesis, thereby driving S phase progression. Cyclin A2 is expressed throughout the S and G2 phases, and is rapidly degraded upon entry of cells into mitosis. An essential function for cyclin A in cell proliferation is supported by the observations that cyclin A2 knockout mouse embryos died shortly after implantation. These studies have led to the current model that the “core” components of the cell cycle machinery (cyclins A and B) are essential elements of the cell cycle engine.

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.

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Ornatsky, O. I., et al. Highly multiparametric analysis by mass cytometry. J Immunol Methods 361 (1-2):1-20, 2010.

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