DVS Sciences

Product Information Sheet

Anti-Phospho-Rb[pS807/pS811]-166Er

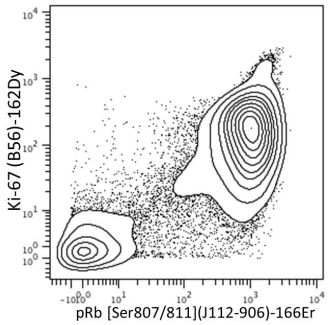
Catalog #: 3166011A
Package Size: 50 tests
Storage: Store product at 4°C. Do not freeze.
Cross Reactivity: Rat, Mouse, Human

Clone: J112-906
Isotype: Mouse IgG2a
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 166Er-anti-pRb [Ser807/811](J112-906).

Description

The Retinoblastoma (Rb) gene encodes a phosphoprotein that negatively regulates the cell cycle, and this activity is critical for the classic RB-mediated tumor suppression function. Mutations in the retinoblastoma (RB) susceptibility gene lead to childhood retinal cancer, and the RB pathway is altered in 70% of human cancer types. Upon mitogenic signaling, RB protein is inhibited by hyperphosphorylation, which disrupts RB transcriptional repression complexes to allow G1 to S phase transition. RB also induces S-phase arrest, triggered by the intra S-phase checkpoint in the presence of DNA-damaging agents, such as cisplatin and VP-16. RB also participates in other cellular processes, such as terminal cell differentiation and maintenance of genetic stability. It has also been suggested that RB can exert an anti-apoptotic function, and that RB is cleaved by caspases during apoptosis induced by VP-16 and Tumor Necrosis Factor-α (TNF-α).

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.

Behbehani, G.K., et al. Single-cell mass cytometry adapted to measurements of the cell cycle. Cytometry A 81 (7): 552-566, 2012.
Ornatsky, O. I., et al. Highly multiparametric analysis by mass cytometry. J Immunol Methods 361 (1-2):1-20, 2010.

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