DVS Sciences

Product Information Sheet

Anti-Phospho-Histone3[Ser28]-175Lu

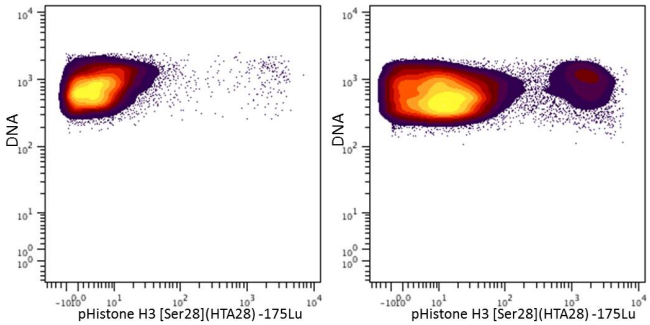
Catalog #: 3175012A
Package Size: 50 tests
Storage: Store product at 4°C. Do not freeze.
Cross Reactivity: Rat, Mouse, Human

Clone: HTA28
Isotype: Rat 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 Hela epithelial cells were incubated for 20 hours in media alone (left) or with Nocodazole (right). Cells were then fixed, permeabilized, and stained with 175Lu-anti-pHistone H3 [Ser28](HTA28).

Description

Histone H3, the most widely modified of all four nucleosomal histones, has several phosphorylation sites on its N-terminal tail. H3 is phosphorylated on threonine 3, serine 10, serine 28, and threonine 32 when cells enter mitosis. Phosphorylation at serine 10 or 28 occurs in association with the induction of immediate-early (IE) genes, and is part of the nucleosomal response downstream of the activation of the ERK1/2 or p38 MAPK pathways. Mitogen and stress activated protein kinases 1 and 2 (MSK1 and MSK2) are activated by either MAPK pathway and have been identified as the kinases mediating the nucleosomal response. As a downstream target of MAPK signaling pathways, H3 phosphorylation is a response to a vast array of extracellular stimuli including growth factors, stressors such as UV light, alcohol and neurotransmitters. Aurora B and PP1 phosphorylate and dephosphorylate H3 serine 10 and serine 28 during mitosis, respectively.

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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