Anti-pHistone H3 [Ser28]-176Yb

Pathologist-Verified Clone for Imaging Mass Cytometry™

Catalog: 3176024D
Package size and concentration: 25 µg, 0.5 mg/mL
Storage: Store at 4 °C. Do not freeze.
Reactivity: Human, Mouse, Rat

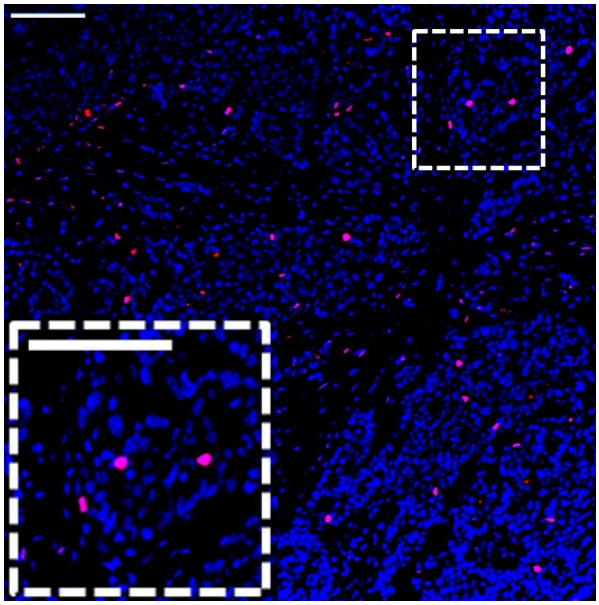
Clone: HTA28
Isotype: Rat IgG2a
Formulation: Antibody stabilizer with 0.05% sodium azide
Application: IMC-Paraffin

Technical Information

Application: The metal-tagged antibody is designed and formulated for the application of Imaging Mass Cytometry (IMC™) using the Fluidigm Hyperion™ Imaging System on formalin-fixed, paraffin-embedded (FFPE) tissue sections.

Quality control: Each lot of conjugated antibody is quality control-tested by Imaging Mass Cytometry on tissue sections.

Recommended concentration: For optimal performance it is recommended that the antibody be titrated for the desired application. Suggested initial dilution range:
IMC-Paraffin: 1:50 to 1:200



Human tonsil (FFPE) stained with 176Yb-anti-pHistone H3 (HTA28) at a dilution of 1:100 (red pseudocolor) and iridium DNA intercalator (blue pseudocolor). Heat-mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. Scale bar size = 100 µm.

Description

Histone H3, the most widely modified of all 4 nucleosomal histones, 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. 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. During mitosis, Aurora B and PP1 phosphorylate and dephosphorylate H3 serine 10 and serine 28, respectively.

References

Chang, Q. et al. "Staining of frozen and formalin-fixed, paraffin-embedded tissues with metal-labeled antibodies for imaging mass cytometry analysis." *Current Protocols in Cytometry* 82 (2017): 12.47.1–12.47.8.

Giesen, C. et al. "Highly multiplexed imaging of tumor tissues with subcellular resolution by mass cytometry." *Nature Methods* 11 (2014): 417–22.