

# Anti-Cleaved Caspase-3 [Asp175]-172Yb

## Pathologist-Verified Clone for Imaging Mass Cytometry™

Catalog: 3172027D

Package size and concentration: 25 µg, 0.5 mg/mL

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

Reactivity: Human, Rat, Mouse, Monkey

Clone: 5A1E

Isotype: Rabbit IgG

Formulation: Antibody stabilizer with 0.05% sodium azide

Application: IMC-Paraffin

## Technical Information

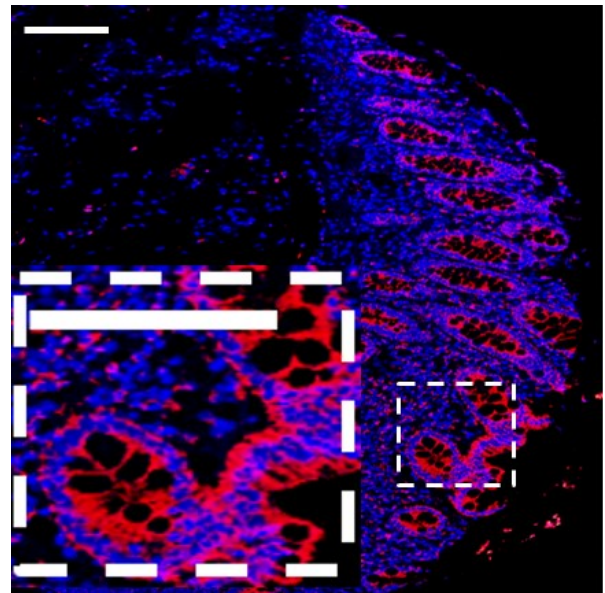
**Application:** The metal-tagged antibody is designed and formulated for the application of Imaging Mass Cytometry (IMC™) using the Fluidigm Hyperion™ Imaging System on formalin-fixed, paraffin-embedded (FFPE) tissue sections.

**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: 1:25 to 1:100

## Description

Caspase-3 (CPP32/Yama/apopain) is a 32 kDa cysteine protease that is activated during the early stages of apoptosis. Activation of caspase-3 requires proteolytic processing of its inactive zymogen into activated p17 and p12 fragments, which associate to form the active enzyme. Caspase-3 is either partially or totally responsible for the proteolytic cleavage of many key proteins in the apoptotic pathway, such as the nuclear enzyme poly (ADP-ribose) polymerase (PARP). Caspase-3 expression is widely distributed. Cells of lymphoid origin express high levels, and active caspase-3 is a marker for cells undergoing apoptosis. Caspase-3 also plays an important role in morphogenetic cell death during development of the mammalian brain. The 5A1E antibody reacts with the active cleaved form of caspase-3.



Human colon (FFPE) stained with 172Yb-anti-caspase-3 [Asp175] (5A1E) at a dilution of 1:50 (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.

## 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.

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