

## Anti-Human cleaved PARP[Asp214]-143Nd

**Catalog #:** 3143011A

**Package Size:** 50 tests

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

**Cross Reactivity:** Human

**Clone:** F21-852

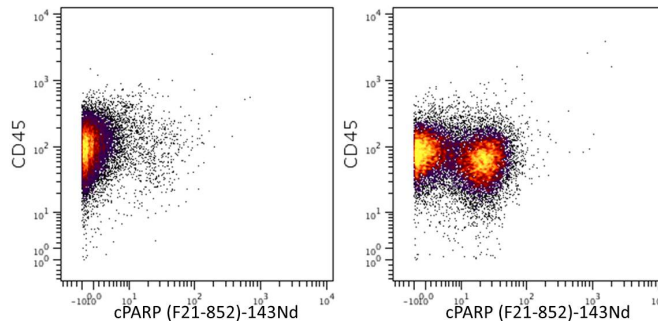
**Isotype:** Mouse IgG1

**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<sup>6</sup> live cells in 100 µl. It is recommended that the antibody be titrated for optimal performance for each of the desired applications.



Human Jurkat T cells were incubated for 18 hours in media alone (left) or with Etoposide (right). Cells were then fixed, permeabilized, and stained with 143Nd-anti-cPARP (F21-852).

### Description

The nuclear protein PARP-1 (Poly [ADP-Ribose] Polymerase), functions as a DNA damage sensor and plays a role in various DNA repair pathways. It has recently been implicated in a variety of cellular functions, including transcriptional regulation. PARP is an enzyme that catalyzes the transfer of ADP-ribose units from NAD<sup>+</sup> to a variety of nuclear proteins including topoisomerases, histones and PARP itself. During apoptosis, Caspase-3 cleaves PARP at a recognition site in its DNA-binding domain to form 24- and 89-kDa fragments, and the presence of the 89-kDa PARP cleavage fragment is considered a marker of cells that have undergone apoptosis. The F21-852 monoclonal antibody reacts only with the 89-kDa fragment of human PARP-1 that is downstream of the Caspase-3 cleavage site (Asp214). It does not react with intact human PARP-1. Cross-reactivity with other members of the PARP superfamily is unknown. Recognition of cleaved PARP in mouse cells has been demonstrated, and it may also cross-react with other species.

### 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.

### Contact Information:

Sales: sales@DVSSciences.com | Support: support@DVSSciences.com  
www.DVSSciences.com | For assistance by phone: 855-DVS-CYTO

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