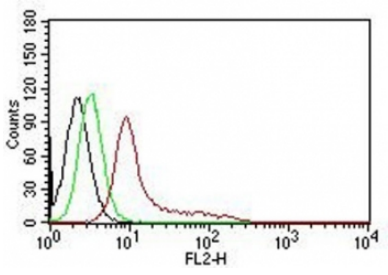
Ku70 + Ku80 PE Antibody for FACS / XRCC6 + XRCC5 High-Sensitivity Flow Cytometry Antibody [clone KU729] (V2128PE)

Catalog No.	Formulation	Size
V2128PE-100T	500 ul at 0.1 mg/ml with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 Tests

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human and Primates. Does not react with mouse, rat and chicken. Other species not known.
Format	PE Conjugate
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	KU729
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	2547
Localization	Nuclear
Applications	Flow Cytometry : 5ul/test/million cells or 5ul/test/100ul of whole blood Immunofluorescence : 1:50-1:100 for 30 minutes at RT
Limitations	This **Ku70 + Ku80 antibody** is available for research use only.



Ku70 + Ku80 PE Antibody for FACS / XRCC6 + XRCC5 High-Sensitivity Flow Cytometry Antibody. Flow cytometry analysis of human K562 cells using Ku70 + Ku80 antibody clone KU729. Cells were fixed and permeabilized to enable intracellular detection of the nuclear Ku heterodimer. The red histogram (PE-conjugated Ku70 + Ku80 antibody) demonstrates a strong rightward shift compared to the black histogram (cells alone) and green histogram (isotype control), indicating high-intensity specific staining of XRCC6/XRCC5. The enhanced signal separation highlights the increased fluorescence output of the PE conjugate, enabling sensitive detection of intracellular Ku70 and Ku80 with low background and clear population resolution.

Description

Ku70 (XRCC6) and Ku80 (XRCC5) form a nuclear heterodimer that is essential for DNA double-strand break repair through the non-homologous end joining pathway. This Ku70 + Ku80 PE Antibody for FACS is uniquely positioned for high-sensitivity flow cytometry applications, enabling robust detection of intracellular DNA repair proteins even in challenging or low-signal conditions. The use of a phycoerythrin (PE) conjugate provides significantly enhanced fluorescence intensity compared to standard fluorophores, making it particularly effective for detecting nuclear targets such as the Ku heterodimer following cell permeabilization.

Ku70 + Ku80 antibody, also known as XRCC6 antibody or XRCC5 antibody, recognizes ubiquitously expressed proteins that may vary in accessibility depending on chromatin state and cellular stress conditions. In these contexts, signal amplification becomes critical. This Ku70 + Ku80 PE Antibody for FACS delivers bright signal output that improves separation between positive and negative populations, especially in experiments involving subtle shifts in DNA repair activity or heterogeneous cell populations.

The clone KU729 antibody supports consistent intracellular detection across a range of cell types. The PE fluorophore is widely used in flow cytometry due to its high quantum yield and strong emission intensity, making it well suited for detecting dim intracellular targets or rare cell subsets. This Ku70 + Ku80 PE Antibody for FACS is therefore particularly useful in studies involving DNA damage response, cancer cell heterogeneity, and treatment-induced stress, where enhanced sensitivity is required to resolve biologically meaningful differences.

Ku70 and Ku80 function as part of the DNA repair protein family and interact with DNA-dependent protein kinase to facilitate efficient DNA end joining. Their nuclear localization necessitates intracellular staining, and signal strength is a key determinant of successful detection. A PE-conjugated Ku70 + Ku80 antibody provides a high-intensity solution for flow cytometry workflows that prioritize sensitivity, resolution, and confident detection of XRCC6 and XRCC5 at the single-cell level.

For target-specific DNA repair pathway investigations, see our Ku70 Antibody / DNA End Binding Protein Antibody and Ku80 Antibody / Non-Homologous End Joining Antibody pages featuring XRCC6- and XRCC5-associated DNA double-strand break repair validation data.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the Ku70 + Ku80 PE Antibody for FACS / XRCC6 + XRCC5 High-Sensitivity Flow Cytometry Antibody to be titered up or down for optimal performance.

Immunogen

Nuclear extract of human HL-60 cells was used as the immunogen for this Ku70 + Ku80 PE Antibody for FACS / XRCC6 + XRCC5 High-Sensitivity Flow Cytometry Antibody.

Storage

Store the Ku70 + Ku80 antibody at 2-8oC. Conjugate is light sensitive, store in the dark.

Alternate Names

XRCC6 PE antibody, XRCC5 PE antibody, Ku70 PE FACS antibody, Ku80 PE flow cytometry antibody, Ku heterodimer PE antibody, Ku70 PE antibody, Ku80 PE antibody, XRCC6 PE antibody, XRCC5 PE antibody