

**XFD647 Anti-human CD45 Antibody \*HI100\***

Catalog Number: 10455170, 10455171

Unit Size: 100 tests, 500 tests

**Product Details**

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Storage Conditions	2-8°C with minimized light exposure. Do not freeze.
Expiration Date	12 months upon receiving
Concentration	Lot specific (please consult certificate of analysis for given lot)
Formulation	Phosphate-buffered saline (PBS, pH 7.2), 0.09% sodium azide, 0.2% (w/v) BSA

**Antibody Properties**

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Species Reactivity	Human
Class	Primary
Clonality	Monoclonal
Host	Mouse
Isotype	Mouse IgG2b, $\kappa$
Immunogen	CD45ra (PTPRC)
Clone	HI100
Conjugate	AF647

**Biological Properties**

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Appearance	Dark blue liquid
Preparation	Antibody purified by affinity chromatography and then conjugated with AF647 under optimal conditions
Application	Flow Cytometry (FACS), Fluorescence Imaging
Recommended Dilutions	For flow cytometry applications, the suggested concentration is at 5 $\mu$ L/million cells in 100 $\mu$ L staining buffer. For the best performance of each application, the optimal concentration of this reagent needs to be carefully determined. <i>*The suggested working dilution is provided as a guide only. It is recommended that the users titrates the product for use in their tests using proper positive and negative controls.</i>

**Spectral Properties**

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Conjugate	AF647
Excitation Wavelength	650 nm
Emission Wavelength	671 nm

## Applications

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HI100 is an anti-human monoclonal antibody that recognizes the CD45ra antigen. CD45ra (sometimes referred to as LY5, PTPRC, GP180 or LCA) is a 205 - 220 kD glycoprotein that is located on the surface of cells such as T cells and B cells. CD45 has been thought to be involved with essential biological processes like dephosphorylation, particularly protein dephosphorylation. Additionally, in certain organisms, it represses microglial cell activation, is involved in the positive regulation of humoral immune response mediated by circulating immunoglobulin and plays a role in the upregulation of extrinsic apoptotic signaling pathway. CD45 is a member of important cellular pathways, in particular, the cell surface receptor signaling pathway, positive regulation of antigen receptor-mediated signaling pathway and T cell receptor signaling pathway. From a research standpoint, it is of biological interest due to its association with vital macromolecules/ligands such as Src kinases. CD45 is a very popular antibody target, with over 54000 publications in the last decade. CD45ra is often used in flow cytometry applications as a phenotypic marker for differentiation of cell types, especially in the study of neuroscience, inhibitory molecules and immunology. This antibody was purified through affinity chromatography and conjugated to XFD647 (ex/em = 650/671 nm). XFD647 is manufactured by AAT Bioquest, and it has a chemical structure similar to that of Alexa Fluor® 647 (Alexa Fluor® is the trademark of Thermo Fisher). It is compatible with the 642 nm laser and 702/85 nm bandpass filter (for example, as in the Luminex Amnis ImageStream).