

**XFD594 Anti-human CD4 Antibody \*RPA-T4\***

Catalog Number: 10041170, 10041171

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 IgG1      |
| Immunogen          | CD4 (Leu-3, T4) |
| Clone              | RPA-T4          |
| Conjugate          | AF594           |

**Biological Properties**

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|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Appearance            | Purple liquid                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Preparation           | Antibody purified by affinity chromatography and then conjugated with AF594 under optimal conditions                                                                                                                                                                                                                                                                                                                                        |
| Application           | Flow Cytometry (FACS), Fluorescence Imaging                                                                                                                                                                                                                                                                                                                                                                                                 |
| Recommended Dilutions | For flow cytometry applications, the suggested concentration is at 5 uL/million cells in 100 uL staining buffer. For the best performance of each application, the optimal concentration of this reagent needs to be carefully determined.<br><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             | AF594  |
| Excitation Wavelength | 590 nm |
| Emission Wavelength   | 618 nm |

## Applications

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RPA-T4 is an anti-human monoclonal antibody that targets the CD4 antigen. CD4 (sometimes called T4 or Leu3a) is a 55 kD transmembrane glycoprotein that is expressed on the surface of cells such as granulocytes, T cells and macrophages. CD4 acts in vital cellular pathways, for instance, the T cell receptor signaling pathway, interleukin-15-mediated signaling pathway and enzyme linked receptor protein signaling pathway. Furthermore, in many organisms, it promotes interleukin-2 biosynthetic process, upregulates peptidyl-tyrosine phosphorylation and acts to positively regulate I-kappaB kinase/NF-kappaB signaling. CD4 has been associated with key biological processes such as membrane organization, specifically fusion of virus membrane with host plasma membrane, and is associated with a variety of biologically interesting macromolecules/ligands, namely, gp120 and Lck. CD4 is a very popular antibody target, with over 180000 publications in the last decade. CD4 is commonly used in flow cytometry applications as a phenotypic marker for differentiation of cell types, particularly in the study of immunology. This antibody was purified through affinity chromatography and conjugated to XFD594 (ex/em = 590/618 nm). XFD594 is manufactured by AAT Bioquest, and it has a chemical structure similar to that of Alexa Fluor® 594 (Alexa Fluor® is the trademark of Thermo Fisher). It is compatible with the 592 nm laser and 610/30 nm bandpass filter (for example, as in the Luminex Amnis ImageStream).