

## XFD555 Anti-human CD4 Antibody \*HIT4a\*

Catalog Number: 10040160, 10040161

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
Immunogen	CD4 (Leu-3, T4)
Clone	HIT4a
Conjugate	AF555

### Biological Properties

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Appearance	Red liquid
Preparation	Antibody purified by affinity chromatography and then conjugated with AF555 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. <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	AF555
Excitation Wavelength	553 nm
Emission Wavelength	568 nm

## Applications

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HIT4a is an anti-human monoclonal antibody that targets the CD4 antigen. CD4 (alternatively called Leu3a or T4) is a 55 kD single-pass type I membrane protein that is expressed on the surface of cells such as granulocytes, T cells and macrophages. CD4 is involved with key cellular pathways, namely, the enzyme linked receptor protein signaling pathway, transmembrane receptor protein tyrosine kinase signaling pathway and cytokine-mediated signaling pathway. Moreover, in many organisms, it is involved in the positive regulation of monocyte differentiation, upregulates MAPK cascade and is an enhancer of ERK1 and ERK2 cascade. CD4 has been associated with vital biological processes like immune response, particularly adaptive immune response, and is associated with a variety of biologically interesting macromolecules/ligands, for example, Lck, IL-16, MHC Class II and gp120. CD4 is a very popular antibody target, with over 180000 publications in the last decade. CD4 is essential for immunology research, typically serving as a phenotypic marker for differentiating cell types in flow cytometric applications. This antibody was purified through affinity chromatography and conjugated to XFD555 (ex/em = 553/568 nm). XFD555 is manufactured by AAT Bioquest, and it has a chemical structure similar to that of Alexa Fluor® 555 (Alexa Fluor® is the trademark of Thermo Fisher). It is compatible with the 561 nm laser and 585/20 nm bandpass filter (for example, as in the BD Special Order LSRFortessa™ Cell Analyzer).