

**XFD647 Anti-human CD40 Antibody \*G28.5\***

Catalog Number: 10401180, 10401181

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, $\kappa$ |
| Immunogen          | CD40 (BP50, TNFRSF5) |
| Clone              | G28.5                |
| 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 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             | AF647  |
| Excitation Wavelength | 650 nm |
| Emission Wavelength   | 671 nm |

## Applications

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G28.5 is an anti-human monoclonal antibody that targets the CD40 antigen. CD40 (also known as Bp50) is a 48 kD transmembrane protein that is expressed on the surface of cells like macrophages, dendritic cells and stem cells. CD40 is a component of key cellular pathways, in particular, the tumor necrosis factor-mediated signaling pathway, immune response-regulating cell surface receptor signaling pathway and CD40 signaling pathway. Also, in many organisms, it upregulates interleukin-12 production, is a positive regulator of isotype switching to IgG isotypes and is a promoter of protein phosphorylation. From a research standpoint, it is of biological interest due to its association with vital macromolecules/ligands like CD40L, CD154 and TRAP. CD40 is a very popular antibody target, with over 30000 publications in the last decade. CD40 is often used in flow cytometry applications as a phenotypic marker for differentiation of cell types, especially in the study of neuroscience. 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 702/87 nm bandpass filter (for example, as in the Luminex Amnis CellStream).