

**XFD680 Anti-human CD29 Antibody \*HI29a\***

Catalog Number: 10290190, 10290191

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          | CD29 (ITGB1, Integrin $\beta$ 1) |
| Clone              | HI29a                            |
| Conjugate          | AF680                            |

**Biological Properties**

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|                       |   |
|-----------------------|---|
| Appearance            | Blue liquid   |
| Preparation           | Antibody purified by affinity chromatography and then conjugated with AF680 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             | AF680  |
| Excitation Wavelength | 681 nm |
| Emission Wavelength   | 704 nm |

## Applications

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The HI29a monoclonal antibody binds with human CD29, a 130 kD transmembrane protein often found on the surface of fibroblasts and platelets. CD29 is a member of essential cellular pathways, namely, the cytokine-mediated signaling pathway, integrin-mediated signaling pathway and CD40 signaling pathway. Also, it has been thought to be involved with vital biological processes like cell adhesion, especially cell adhesion mediated by integrin. In some organisms, CD29 acts to positively regulate apoptotic process, acts to positively regulate signaling receptor activity and enhances angiogenesis. From a research standpoint, it is of biological interest due to its association with critical macromolecules/ligands such as VCAM-1. CD29 is a fairly uncommon antibody target, with a little more than 7000 publications in the last decade. Even still, CD29 has been widely used in cell adhesion, cell biology and stem cells research, frequently serving as a phenotypic marker for differentiating cell types in flow cytometric applications. This antibody was purified through affinity chromatography and conjugated to XFD680 (ex/em = 681/704 nm). XFD680 is manufactured by AAT Bioquest, and it has a chemical structure similar to that of Alexa Fluor® 680 (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).