

## iF647 Anti-human/mouse T-bet Antibody

|                           |                                             |
|---------------------------|---------------------------------------------|
| <b>Catalog Number:</b>    | 111503, 111504                              |
| <b>Size:</b>              | 25 tests, 100 tests                         |
| <b>Target Name:</b>       | T-bet, T box 21, T-box expressed in T cells |
| <b>Regulatory Status:</b> | RUO                                         |

### PRODUCT DETAILS

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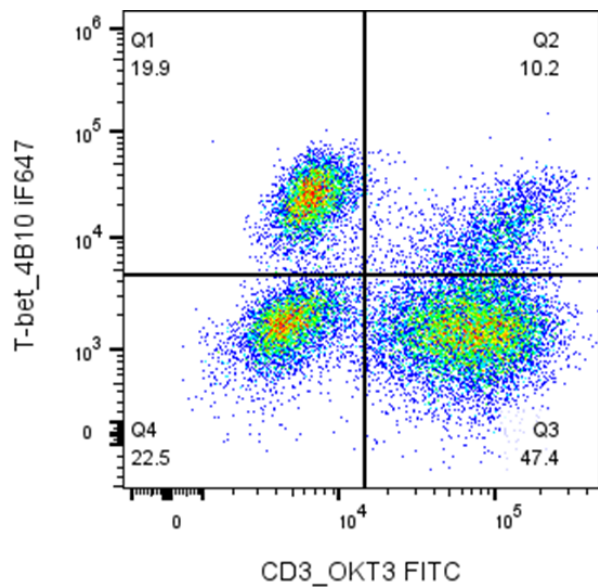
|                               |                                                                                                                                                                                                                                                                                             |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Clone:</b>                 | TBX21M1                                                                                                                                                                                                                                                                                     |
| <b>Application:</b>           | Intracellular Flow Cytometry                                                                                                                                                                                                                                                                |
| <b>Reactivity:</b>            | Human, Mouse                                                                                                                                                                                                                                                                                |
| <b>Format:</b>                | iF647                                                                                                                                                                                                                                                                                       |
| <b>Isotype:</b>               | Mouse IgG1                                                                                                                                                                                                                                                                                  |
| <b>Antibody Type:</b>         | Monoclonal                                                                                                                                                                                                                                                                                  |
| <b>Formulation:</b>           | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA                                                                                                                                                                                                       |
| <b>Protein Concentration:</b> | Supplied at a lot-specific concentration.                                                                                                                                                                                                                                                   |
| <b>Storage&amp;Handling:</b>  | The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.                                                                                                                                                        |
| <b>Recommended Usage:</b>     | For flow cytometric staining, it is recommended to use 5 uL of this reagent per 0.5-1.0 million cells in a 100 µL volume. Optimal reagent performance should be determined by titration for each specific application. iF647 has an excitation max at 656 nm and an emission max at 670 nm. |
| <b>Excitation Laser:</b>      | Red Laser (633 nm)                                                                                                                                                                                                                                                                          |
| <b>Isotype Control:</b>       | 301413                                                                                                                                                                                                                                                                                      |

### BACKGROUND INFORMATION

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T-bet (TBX21) is a T-box transcription factor that plays a central role in the differentiation and function of Th1 CD4<sup>+</sup> T cells in both humans and mice. Its expression is induced by IFN- $\gamma$  and it directly regulates the transcription of IFN- $\gamma$ , IL-12 receptor  $\beta$ , and IL-2 through modulation of chromatin accessibility. Loss of T-bet impairs Th1 lineage commitment, while ectopic expression promotes Th1 polarization. Beyond T cells, T-bet also contributes to B cell class-switch recombination. Due to its conserved function across species, T-bet is a key regulator of cell-mediated immunity and inflammatory responses.

## PRODUCT DATA



Human peripheral blood lymphocytes were stained with FITC Anti-human CD3 clone OKT3 and intracellular stained with iF647 Anti-human/mouse T-bet antibody clone TBX21M1.

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