T-bet (MRQ-46)

For In Vitro Diagnostic Use (IVD)

English: Instructions For Use

Presentation
Anti-T-bet is a rabbit monoclonal from tissue culture diluted in phosphate buffered saline, pH 7.4, with protein base, and preserved with sodium azide.

Applications
T-bet, a T-box transcription factor, is expressed in CD4+ T-lymphocytes committed to T-helper (Th) cell development from naïve T-helper precursor cells (Thp) and redirects Th2 T cells to Th1 development.

Anti-T-bet is a marker of mature T-cells and is expressed at very low levels in Thp cells and is absent in precursor T-lymphoblastic leukemia/lymphoma cells. Scattered small lymphocytes in the interfollicular T-cell zone of reactive lymphoid tissue, including tonsil, lymph node, and spleen exhibited nuclear staining for T-bet, with no T-bet staining observed in germinal centers or mantle or mantle zones.

T-bet is expressed in a significant subset of B-cell lymphoproliferative disorders, particularly at an early stage of B-cell development (precursor B-cell lymphoblastic leukemia/lymphoma), and B-cell neoplasms derived from mature B cells, including CLL/SLL, marginal zone lymphoma, and hairy cell leukemia. In contrast, B-cell neoplasms derived from pregerminal center or germinal center B-cells, including mantle cell lymphoma, follicular lymphoma, diffuse large B-cell lymphoma, and Burkitt lymphoma are negative for T-bet. Therefore, anti-T-bet should serve as a useful marker for the diagnosis and subtyping of B-cell and T-cell lymphoproliferative disorders.

Reactivity
Paraffin, frozen
Control
Tonsil, hairy cell leukemia
Visualisation
Nuclear
Stability
Up to 36 months; store at 2-8°C
Isotype
IgG1

Antibody color does not affect performance

Preparation and Pretreatment
1. Cut 3-4 µm section of formalin-fixed paraffin-embedded tissue and place on positively charged slides; dry overnight at 58°C.
2. Deparaaffinize, rehydrate, and epitope retrieve; the preferred method is the use of Heat Induced Epitope Retrieval (HIER) techniques using Cell Marque’s Trilogy™ in conjunction with a pressure cooker. The preferred method allows for simultaneous deparaffinization, rehydration, and epitope retrieval. Upon completion, rinse with 5 changes of distilled or deionized water.
3. If using HRP detection system, place slides in peroxide block for 10 minutes; rinse. If using AP detection system, omit this step.

Recommended Protocol for Staining at Room Temperature Using CytoScan™ BSA Detection System
1. Apply the antibody and incubate for 30 - 60 minutes; rinse.
2. Apply the link and incubate for 10 minutes; rinse.
3. Apply the label and incubate for 10 minutes; rinse.
4. Apply ample amount of chromogen and incubate for 1 - 10 minutes; rinse.
5. Dehydrate and coverslip.

Recommended Protocol for Staining at Room Temperature Using PolyScan™ Polymer Detection System
1. Apply the antibody and incubate for 30 - 60 minutes; rinse.
2. Apply the PolyScan™ Polymer Rabbit/Mouse Detection System for 30 minutes; rinse.
3. Apply ample amount of chromogen and incubate for 1 - 10 minutes; rinse.
4. Dehydrate and coverslip.

References

*The dilutions set forth above are estimates; actual results may differ because of variability in methods and protocols. Validation of antibody performance/protocol is the responsibility of the end user.