3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Monoclonal Anti-TCF-4 (T-Cell Factor-4), Clone 6H5-3
produced in mouse, purified immunoglobulin

Catalog Number **T5817**

Product Description

Monoclonal Anti-TCF-4 (T-Cell Factor-4) (mouse IgG2a isotype) is derived from the 6H5-3 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with a His-tagged fusion protein corresponding to amino acids 31-331 of human TCF-4. The antibody is purified from ascites fluid using Protein G chromatography.

Monoclonal Anti-TCF-4 (T-Cell Factor-4) recognizes the human TCF-4 using immunoblotting (66 kDa). The antibody may be used for immunoblotting, immunoprecipitation,[1] immunohistochemistry,[1] and gel-shift assays.[1]

T-cell factor-4, TCF-4, is a transcription factor of the High Mobility Group of DNA binding proteins. It is one member of a family of four proteins referred to as LEF/TCF transcription factors (LEF-1, TCF-1, TCF-3 and TCF-4). These factors play crucial roles in WNT/Wingless signaling, a signal transduction cascade that directs cell differentiation. Aberrant activation of the WNT/Wingless pathway is also a root cause in the genesis of certain cancers such as colon cancer, melanoma and breast cancer.

TCF-4 generates transcriptionally active complexes with β-catenin in colon carcinoma cells. TCF-4 expression indicates an important role in vertebrate development. TCF-4 expression during murine embryogenesis occurs much later than TCF-1, TCF-3, and LEF-1 and appears to be restricted to the midbrain and intestinal epithelium. TCF-4 expression in the central nervous system largely overlaps with three members of the Wnt family: Wnt-1, which is essential for midbrain development, Wnt-3, and Wnt-3a. Therefore, TCF-4 likely mediates signaling via these factors within the developing midbrain. Similarly, TCF-4 expression appears to mediate Wnt-driven function in the embryonic intestine. In mice lacking TCF-4, development of the small intestine is severely impaired as a direct result of an inability to maintain the stem cells within the intervillus regions.

Reagent

Supplied as a solution in 0.7 M Tris-glycine, pH 7.4, containing 0.105 M sodium chloride, 30% glycerol and 0.035% sodium azide.

Protein concentration: ~1 mg/ml.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at –20 °C. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1-4 µg/mL is recommended using whole extracts of Cos-1 cells transfected with human TCF-4.

Note: In order to obtain the best results in various techniques and preparations, we recommend determining optimal working concentration by titration.

References

1. Barker, N., et al., Restricted high level expression of Tcf-4 protein in intestinal and mammary gland epithelium. *Am. J. Pathol*., **154**, 29-35 (1999).
2. Korinek, V., et al., Depletion of epithelial stem-cell compartments in the small intestine of mice lacking Tcf-4.*Nat. Genet*., **19**, 379-383 (1998).
3. Ishitani, T., et al., The TAK1-NLK-MAPK-related pathway antagonizes signalling between beta-catenin and transcription factor TCF. *Nature*, **399**, 798-802 (1999)

TD,KAA,PHC 06/09-1