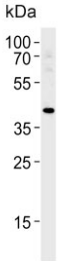
TBX1 Antibody / Developmental Transcription Factor Antibody (F54472)

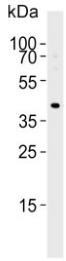
Catalog No.	Formulation	Size
F54472-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F54472-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

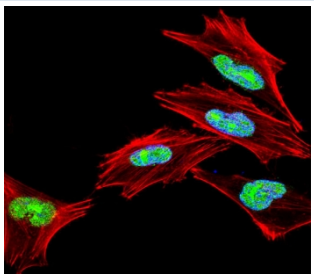
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity purified
UniProt	O43435
Localization	Nuclear
Applications	Immunohistochemistry (FFPE): 1:25 Western blot: 1:500-1:2000 Immunofluorescence: 1:25
Limitations	This TBX1 Antibody / Developmental Transcription Factor Antibody is available for research use only.



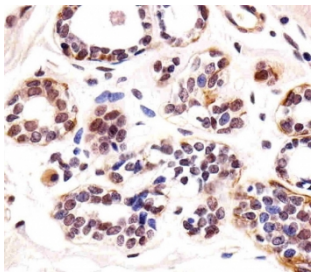
TBX1 Antibody Endothelial Cell WB. Western blot analysis of human HUVEC cell lysate using TBX1 Antibody / Developmental Transcription Factor Antibody demonstrates a distinct band at approximately 43 kDa, consistent with the predicted molecular weight of T-Box Transcription Factor 1 (TBX1). TBX1 is a T-box family transcription factor that regulates developmental gene expression programs involved in embryonic patterning, organogenesis, and tissue morphogenesis. Expression of TBX1 has been associated with developmental pathways governing cardiovascular, craniofacial, pharyngeal, and neural tissue formation. Detection of TBX1 in human endothelial cells is consistent with its established role in developmental signaling networks that contribute to cardiovascular development and tissue organization. The observed band supports the utility of this antibody for western blot analysis of TBX1 expression. Predicted molecular weight: ~43 kDa.



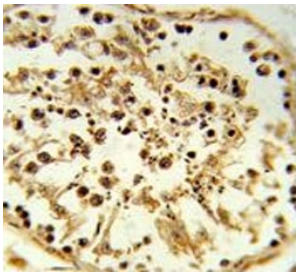
TBX1 Antibody HUVEC WB. Western blot analysis of human HUVEC cell lysate using TBX1 Antibody / Developmental Transcription Factor Antibody demonstrates a distinct immunoreactive band at approximately 43 kDa, consistent with the predicted molecular weight of T-Box Transcription Factor 1 (TBX1). TBX1 is a member of the T-box family of developmental transcription factors that regulate gene expression programs involved in embryonic patterning, tissue specification, and organogenesis. TBX1 has been implicated in developmental pathways associated with cardiovascular morphogenesis, pharyngeal arch formation, and cellular differentiation. Detection of TBX1 in human endothelial cells is consistent with its role in transcriptional networks that contribute to vascular and cardiovascular development. The observed band supports the utility of this antibody for western blot detection of TBX1 expression in endothelial and developmental biology research applications. Predicted molecular weight: ~43 kDa.



TBX1 Antibody Nuclear Localization IF. Immunofluorescent staining of fixed and permeabilized human A2058 cells using TBX1 Antibody / Developmental Transcription Factor Antibody demonstrates prominent nuclear localization of TBX1 (green). Nuclei are counterstained with DAPI (blue), while actin cytoskeletal filaments are visualized with anti-Actin antibody (red). TBX1 is a T-box family transcription factor that regulates developmental gene expression programs involved in embryonic patterning, tissue specification, and organogenesis. As a DNA-binding regulatory protein, TBX1 functions primarily within the nucleus where it controls transcriptional networks associated with cellular differentiation and developmental morphogenesis. The observed nuclear staining pattern is consistent with the established role of TBX1 as a developmental transcription factor and supports the utility of this antibody for immunofluorescent detection of TBX1 expression and subcellular localization.



TBX1 Antibody Human Breast IHC. Immunohistochemical staining of FFPE human breast tissue using TBX1 Antibody / Developmental Transcription Factor Antibody demonstrates predominantly nuclear HRP-DAB brown staining within mammary epithelial cells lining glandular and ductal structures. TBX1 is a T-box family transcription factor that regulates developmental gene expression programs involved in tissue specification, organogenesis, and cellular differentiation. As a DNA-binding regulatory protein, TBX1 functions primarily within the nucleus where it controls transcriptional networks associated with embryonic development and tissue morphogenesis. The observed nuclear staining pattern is consistent with the expected subcellular localization of a developmental transcription factor and supports the utility of this antibody for immunohistochemical detection of TBX1 expression in human tissues. HIER: steam tissue sections in pH 6 citrate buffer for 20 minutes and allow to cool prior to staining.



TBX1 Antibody Human Testis IHC. Immunohistochemical staining of FFPE human testis tissue using TBX1 Antibody / Developmental Transcription Factor Antibody demonstrates prominent nuclear HRP-DAB brown staining within cells of the seminiferous tubules. TBX1 is a T-box family transcription factor that regulates developmental gene expression programs involved in tissue specification, cellular differentiation, and organogenesis. As a DNA-binding regulatory protein, TBX1 functions primarily within the nucleus where it controls transcriptional networks that coordinate developmental and cell fate determination pathways. The observed nuclear staining pattern is consistent with the expected localization of a transcription factor and supports the utility of this antibody for immunohistochemical detection of TBX1 expression in human tissues. HIER: steam tissue sections in pH 6 citrate buffer for 20 minutes and allow to cool prior to staining.

Description

TBX1 antibody is useful for studying T-Box Transcription Factor 1 (TBX1), a developmental transcription factor that

regulates gene expression programs involved in embryonic patterning, tissue specification, and organogenesis. TBX1 belongs to the highly conserved T-box family of DNA-binding proteins, which function as master regulators of developmental processes by controlling cellular differentiation, proliferation, migration, and tissue morphogenesis. Through these activities, TBX1 contributes to the coordinated formation of multiple organ systems during vertebrate development.

TBX1 functions as a sequence-specific transcription factor that influences developmental gene networks governing embryonic growth and tissue organization. Members of the T-box family play essential roles in establishing cellular identity and directing developmental pathways required for proper morphogenesis. As a result, TBX1 occupies a central position within signaling networks that regulate formation and patterning of embryonic structures.

Expression of TBX1 has been associated with developing tissues involved in cardiovascular, craniofacial, pharyngeal, musculoskeletal, and nervous system development. Proper regulation of TBX1 activity is important for coordination of developmental programs that guide organ formation and tissue specialization. Analysis of TBX1 expression can therefore provide insight into mechanisms controlling embryonic development, cellular differentiation, and vertebrate morphogenesis.

As a developmental transcription factor, TBX1 participates in genetic pathways that regulate communication between embryonic cell populations and help coordinate the formation of complex anatomical structures. These functions make TBX1 an important target for investigations of developmental biology, embryology, stem cell differentiation, and tissue patterning. Research involving TBX1 contributes to a broader understanding of how transcriptional programs direct vertebrate development and organogenesis.

Beyond its role in embryonic development, TBX1 serves as a useful marker for studies examining developmental gene regulation and tissue-specific differentiation pathways. Because developmental transcription factors frequently act at critical decision points within cellular regulatory networks, they remain important subjects of investigation across multiple fields of biomedical research.

TBX1 antibodies are commonly used in immunohistochemistry, western blotting, immunofluorescence, flow cytometry, and related protein detection applications. These reagents support investigations of embryonic development, organogenesis, developmental gene regulation, cardiovascular biology, craniofacial development, neural development, stem cell differentiation, and vertebrate morphogenesis.

Researchers studying neural development, neurogenesis, developmental transcription factors, and nervous system patterning may also be interested in our broader Neuroscience Antibody collection.

Application Notes

The stated application concentrations are suggested starting points. Titration of the TBX1 Antibody / Developmental Transcription Factor Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 327-356 from the human protein was used as the immunogen for the TBX1 antibody.

Storage

Aliquot the TBX1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

T-Box Transcription Factor TBX1 Antibody, T-Box Protein 1 Antibody, Developmental Transcription Factor Antibody, Organogenesis Regulator Antibody, Embryonic Patterning Protein Antibody, Cardiofacial Development Protein Antibody

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