abcam

ab315794

Anti-TBR2 / Eomes antibody [EPR26474-17]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR26474-17
Purification technique	Affinity purification Protein A
Specificity	Unsuitable for mouse-WB and rat-WB.
Concentration	0.515 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Dot

Tested

Species	Transfected cell lysate - Human
Dilution info	1/1000
Notes	-

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500

Notes	-

Species	Mouse
Dilution info	1/500
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Transfected cell lysate - Human
Dilution info	-

Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat, Transfected cell lysate - Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat, Transfected cell lysate - Human
Dilution info	-
Notes	-

Target data

See full target information EOMES

Function	Functions as a transcriptional activator playing a crucial role during development. Functions in trophoblast differentiation and later in gastrulation, regulating both mesoderm delamination and endoderm specification. Plays a role in brain development being required for the specification and the proliferation of the intermediate progenitor cells and their progeny in the cerebral cortex (PubMed:17353897). Required for differentiation and migration of unipolar dendritic brush cells (PubMed:33488348). Also involved in the differentiation of CD8+ T-cells during immune response regulating the expression of lytic effector genes (PubMed:17566017).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	TBR2 also known as Eomes or Eomesodermin is a transcription factor with a molecular mass of approximately 72 kDa. It is a member of the T-box family and is expressed predominantly in the developing central nervous system especially in the intermediate progenitor cells in the subventricular zone of the cortex. TBR2 plays a significant role in neurogenesis by regulating the proliferation and differentiation of neuronal progenitor cells. This regulation ensures proper development of specific neural circuits critical for overall brain function.
Biological function summary	TBR2 is important in controlling the transition of neural progenitors during cortical development. It serves as an important marker for intermediate neuronal precursors highlighting its importance in the progression from radial glia to neurons. TBR2 does not function in a complex but works closely with the transcription factor Neurogenin 2 to control neuronal differentiation. Its activity

	determines the timing of neuronal differentiation making it indispensable for orderly cortical layer formation.
Pathways	TBR2 is involved in the Wnt signaling and Notch signaling pathways both key regulators of neurodevelopment. In the Wnt pathway TBR2 influences the balance between progenitor cell proliferation and differentiation by interacting with proteins such as Beta-catenin. In the Notch signaling pathway TBR2 modulates neural precursor cell fate decisions often in relation with proteins like DLL1. These pathways ensure proper brain structure and function by coordinating neural progenitor activity.
Associated diseases and disorders	TBR2 mutations or misregulation can lead to neurodevelopmental disorders such as microcephaly and intellectual disabilities. The protein's association with these conditions reflects its critical role in cortical development and neuronal differentiation. TBR2's dysregulation is often observed alongside the malfunction of its pathway partners like Beta-catenin in the development of such disorders illustrating the intricate interplay of genetic and molecular factors underlying these diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

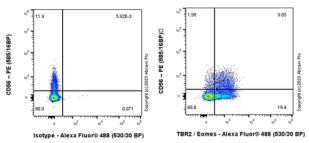
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

14 product images

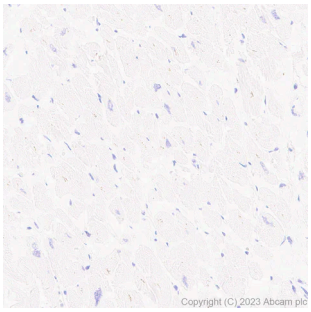


Flow Cytometry (Intracellular) - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

Flow cytometric analysis of 2% paraformaldehyde fixed 0.1% Tween-20 permeabilized Human PBMC (human peripheral blood mononuclear cell) cells labelling TBR2 / Eomes with ab315794 at 1/500 dilution (0.1 ug)/Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control.

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Cells are co-stained with CD56 conjugated to PE.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

TBR2 / Eomes Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human cardiac muscle using rabbit Anti-TBR2 / Eomes antibody

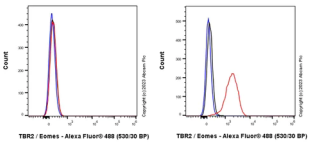
Immunohistochemical analysis of paraffin-embedded Human cardiac muscle tissue labeling TBR2 / Eomes with ab315794 at 1/500 (1.03 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Negative control: No staining on human cardiac muscle.
The section was incubated with ab315794 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins

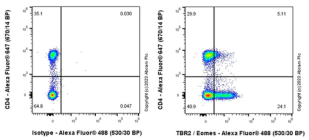


Flow Cytometry (Intracellular) - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (human cervical adenocarcinoma epithelial cell, Left) / No-GFP-CD16.NK-92 (CD16 ectopically expressed natural killer(NK-92®) cell with no GFP tag, Right) cells labelling TBR2 / Eomes with ab315794 at 1/500 dilution (0.1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Negative control: HeLa.

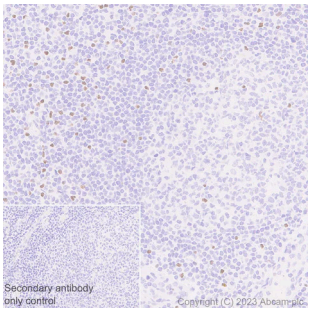


Flow Cytometry (Intracellular) - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

Flow cytometric analysis of 2% paraformaldehyde fixed 0.1% Tween-20 permeabilized Human PBMC (human peripheral blood mononuclear cell) cells labelling TBR2 / Eomes with ab315794 at 1/500 dilution (0.1 ug)/Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control.

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Cells are co-stained with CD4 conjugated to Alexa Fluor®647.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

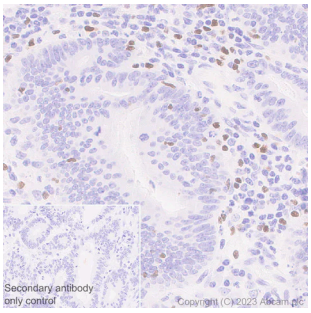
Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling TBR2 / Eomes with ab315794 at 1/500 (1.03 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Nuclear staining on human tonsil.
The section was incubated with ab315794 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

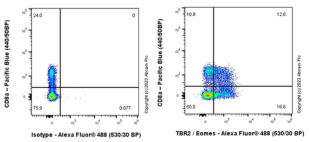
Immunohistochemical analysis of paraffin-embedded Human colon cancer tissue labeling TBR2 / Eomes with ab315794 at 1/500 (1.03 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Nuclear staining on immune cells in human colon cancer.
The section was incubated with ab315794 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins

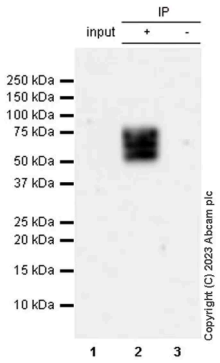


Flow Cytometry (Intracellular) - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

Flow cytometric analysis of 2% paraformaldehyde fixed 0.1% Tween-20 permeabilized Human PBMC (human peripheral blood mononuclear cell) cells labelling TBR2 / Eomes with ab315794 at 1/500 dilution (0.1 ug)/Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control.

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Cells are co-stained with CD8a conjugated to Pacific Blue.



Immunoprecipitation - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

TBR2 / Eomes was immunoprecipitated from 0.35 mg No-GFP-CD16.NK-92 (CD16 ectopically expressed natural killer(NK-92®) cell with no GFP tag) whole cell lysate with ab315794 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab315794 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: No-GFP-CD16.NK-92 (CD16 ectopically expressed natural killer(NK-92®) cell with no GFP tag) whole cell lysate
Lane 2: ab315794 IP in No-GFP-CD16.NK-92 (CD16 ectopically expressed natural killer(NK-92®) cell with no GFP tag) whole cell lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab315794 in No-GFP-CD16.NK-92 whole cell lysate.

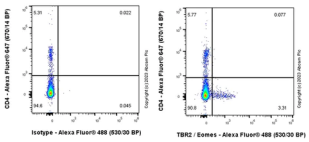
All lanes:
Immunoprecipitation - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794) at 1/30 dilution

All lanes:
No-GFP-CD16.NK-92 (CD16 ectopically expressed natural killer(NK-92®) cell with no GFP tag) whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 50s

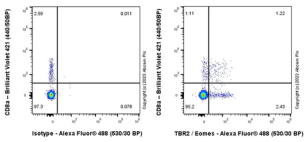


Flow Cytometry (Intracellular) - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

Flow cytometric analysis of 2% paraformaldehyde fixed 0.1% Tween-20 permeabilized Mouse PBMC (mouse peripheral blood mononuclear cell) cells labelling TBR2 / Eomes with ab315794 at 1/500 dilution (0.1 ug)/Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control.

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Cells are co-stained with CD4 conjugated to Alexa Fluor®647.

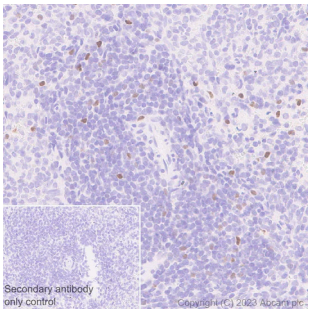


Flow Cytometry (Intracellular) - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

Flow cytometric analysis of 2% paraformaldehyde fixed 0.1% Tween-20 permeabilized Mouse PBMC (mouse peripheral blood mononuclear cell) cells labelling TBR2 / Eomes with ab315794 at 1/500 dilution (0.1 ug)/Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control.

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Cells are co-stained with CD8a conjugated to BV421.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

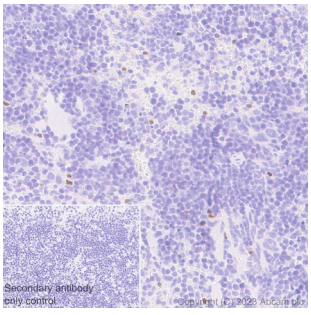
Immunohistochemical analysis of paraffin-embedded Rat spleen tissue labeling TBR2 / Eomes with ab315794 at 1/500 (1.03 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Nuclear staining on rat spleen.
The section was incubated with ab315794 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

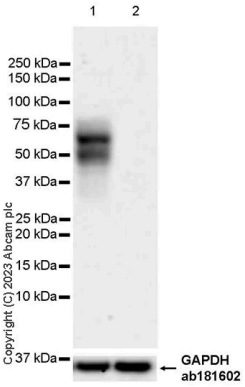
Immunohistochemical analysis of paraffin-embedded Mouse spleen tissue labeling TBR2 / Eomes with ab315794 at 1/500 (1.03 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Nuclear staining on mouse spleen.
The section was incubated with ab315794 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Western blot - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

TBR2 / Eomes Western blot staining using rabbit Anti-TBR2 / Eomes antibody

Negative control: HeLa.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794) at 1/1000 dilution

Lane 1:
No-GFP-CD16.NK-92 (CD16 ectopically expressed natural killer(NK-92®) cell with no GFP tag) whole cell lysate at 20 µg

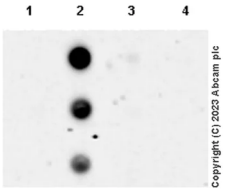
Lane 2:
HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 50 kDa, 70 kDa, 36 kDa

Exposure time: 103s



Dot Blot - Anti-TBR2 / Eomes antibody [EPR26474-17] (ab315794)

TBR2 / Eomes Dot Blot staining using rabbit Anti-TBR2 / Eomes antibody

Dot blot analysis of TBR2 / Eomes using ab315794 at 1:1000 (0.515 ug/ml) followed by a Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1:100,000 dilution.

Exposure time: 180 seconds.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

This antibody does not cross-react with human TBR1 and TBX21.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.