abcam

ab314067

Anti-ThPOK antibody [BLR191J] - BSA free

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.8 - 8.6 Preservative: 0.09% Sodium azide Constituents: 98% Borate buffered saline
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human ZBTB7B aa 250-300. The exact immunogen used to generate this antibody is proprietary information. Database link O15156
Clone number	BLR191J
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

ICC

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Target data

See full target information ZBTB7B

Function

Transcription regulator that acts as a key regulator of lineage commitment of immature T-cell precursors. Exerts distinct biological functions in the mammary epithelial cells and T cells in a tissue-specific manner. Necessary and sufficient for commitment of CD4 lineage, while its absence causes CD8 commitment. Development of immature T-cell precursors (thymocytes) to either the CD4 helper or CD8 killer T-cell lineages correlates precisely with their T-cell receptor specificity for major histocompatibility complex class II or class I molecules, respectively. Cross-antagonism between ZBTB7B and CBF complexes are determinative to CD4 versus CD8 cell fate decision. Suppresses RUNX3 expression and imposes CD4+ lineage fate by inducing the SOCS suppressors of cytokine signaling. induces, as a transcriptional activator, SOCS genes expression which represses RUNX3 expression and promotes the CD4+ lineage fate. During CD4 lineage commitment, associates with multiple sites at the CD8 locus, acting as a negative regulator of the CD8 promoter and enhancers by epigenetic silencing through the recruitment of class II histone deacetylases, such as HDAC4 and HDAC5, to these loci. Regulates the development of IL17-producing CD1d-restricted naural killer (NK) T cells. Also functions as an important metabolic regulator in the lactating mammary glands. Critical feed-forward regulator of insulin signaling in mammary gland lactation, directly regulates expression of insulin receptor substrate-1 (IRS-1) and insulin-induced Akt-mTOR-SREBP signaling (By similarity). Transcriptional repressor of the collagen COL1A1 and COL1A2 genes. May also function as a repressor of fibronectin and possibly other extracellular matrix genes (PubMed:9370309). Potent driver of brown fat development, thermogenesis and cold-induced beige fat formation. Recruits the brown fat lncRNA 1 (Blnc1):HNRNPU ribonucleoprotein complex to activate thermogenic gene expression in brown and beige adipocytes (By similarity).

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage duration	Up to 12 months
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

REACH authorisation
Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.
It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Supplementary info

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

Activity summary	ThPok also known as Th-inducing POZ-Kruppel factor or cKrox is a zinc finger transcription factor with a molecular mass of approximately 64 kDa. You find ThPok prominently expressed in CD4+ T cells where it plays a critical role in T cell development. Its primary function is to dictate CD4 versus CD8 lineage choice during T cell maturation in the thymus. ThPok is encoded by the Zbtb7b gene and this transcription factor binds to specific DNA sequences to regulate the transcription of genes vital to the immune response.
Biological function summary	The transcription factor ThPok is essential for the differentiation of naïve T cells into helper T cells. It ensures T cells develop into a type more suited to responding to pathogens. ThPok interacts with several other transcription factors and components of the T cell receptor signaling pathway. It is not part of a larger complex but works in coordination with other proteins to mediate its effects. In the absence of ThPok naïve T cells might undergo alternative development pathways.
Pathways	Signaling events critical to T cell maturation involve ThPok. For example it is an important component of the Notch signaling pathway and contributes to T cell receptor signaling which influences T cell fate decisions. Proteins such as GATA3 and Runx3 interface with ThPok within these pathways. ThPok works to suppress Runx3 expression thereby preventing CD8+ T cell lineage development when CD4+ lineage is required.
Associated diseases and disorders	ThPok plays an important role in immune conditions like autoimmunity and immune deficiency syndromes. Irregular expression or mutations within the ThPok gene might contribute to the development of autoimmune disorders where T cells attack the body's own tissues. ThPok's interaction with proteins like Foxp3 is relevant in maintaining a balance in immune tolerance. Additionally ThPok's role in

T cell differentiation links it to immune deficiency disorders that arise from impaired T helper cell function.

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

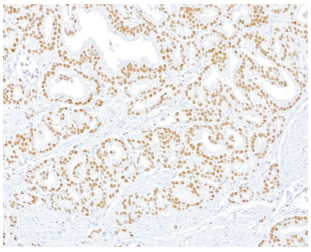
We do not recommend this combination. It is not covered by our product promise.

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.

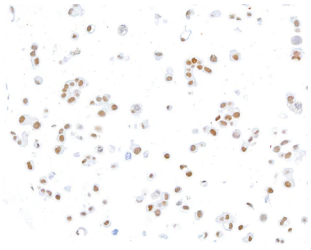
Full details and terms and conditions can be found here:
Terms & Conditions.

7 product images



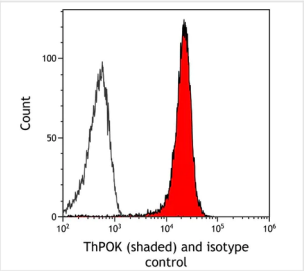
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ThPOK antibody [BLR191J] - BSA free (ab314067)

Detection of human ThPOK by immunohistochemistry. Sample:FFPE section of prostate carcinoma. Antibody: Rabbit anti-ThPOK recombinant monoclonal antibody [BLR191] (A700-191 lot 1).Secondary:HRP-conjugated goat anti-rabbit IgG (A120-501P).



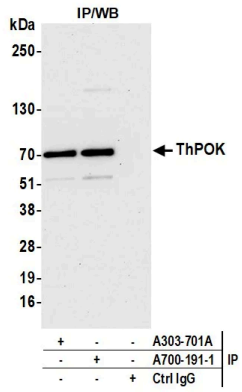
Immunocytochemistry - Anti-ThPOK antibody [BLR191J] - BSA free (ab314067)

Detection of human ThPOK by immunocytochemistry. Sample:FFPE section of Ovcar-3 cells. Antibody: Rabbit anti-ThPOK recombinant monoclonal antibody [BLR191] . Secondary: HRP-conjugated goat antirabbit IgG



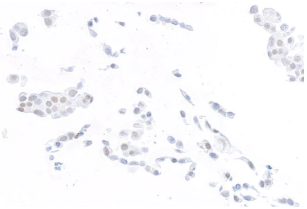
Flow Cytometry - Anti-ThPOK antibody [BLR191J] - BSA free (ab314067)

Detection of human ThPOK (shaded) in HeLa cells by flow cytometry. Antibody: Rabbit anti-ThPOK recombinant monoclonal antibody [BLR191J] (A700-191) or isotype control (unshaded). Secondary: conjugated goat anti-rabbit IgG



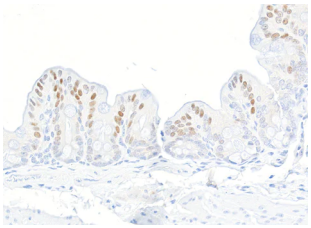
Immunoprecipitation - Anti-ThPOK antibody [BLR191J] - BSA free (ab314067)

Detection of human ThPOK by western blot of immunoprecipitates Samples:Whole cell lysate (1.0 mg per IP reaction; 20% of IP loaded) from LNCaP cells prepared using NETN lysis buffer. Antibodies:Rabbit antiThPOK recombinant monoclonal antibody [BLR191J] (A700-191 lot 1) used for IP at 20 µl/mg lysate. ThPOK was also immunoprecipitated by a second antibody against a different epitope of ThPOK (A303-701A). For blotting immunoprecipitated ThPOK, A700-191 was used at 1:1000. Chemiluminescence with an exposure time of 10 seconds.



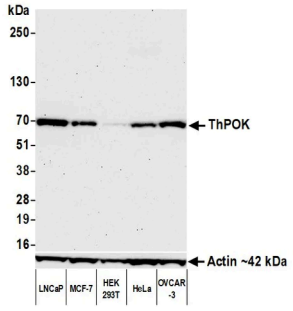
Immunocytochemistry - Anti-ThPOK antibody [BLR191J] - BSA free (ab314067)

Detection of mouse ThPOK by immunocytochemistry. Sample:FFPE section of RenCa cells. Antibody:Rabbit antiThPOK recombinant monoclonal antibody [BLR191] Secondary:HRP-conjugated goat anti-rabbit IgG



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ThPOK antibody [BLR191J] - BSA free (ab314067)

Sample:FFPE section of mouse gut. Antibody:Rabbit antiThPOK recombinant monoclonal antibody [BLR191] (A700-191 lot 1).Secondary:HRP-conjugated goat antirabbit IgG (A120-501P).



Western blot - Anti-ThPOK antibody [BLR191J] - BSA free (ab314067)

Samples: Whole cell lysate (50 µg) from LNCaP, MCF-7, HEK293T, HeLa, and OVCAR-3 cells prepared using NETN lysis buffer. Antibody: Rabbit anti-ThPOK recombinant monoclonal antibody [BLR191J] (A700-191CF) used at 1:1000. Secondary: HRP-conjugated goat anti-rabbit IgG. Chemiluminescence with an exposure time of 75 seconds. Lower Panel: Rabbit anti-Actin recombinant monoclonal antibody [BLR057F].
All lanes:
Western blot - Anti-ThPOK antibody [BLR191J] - BSA free (ab314067) at 1/1000 dilution

Lane 1:
LNCaP Whole cell lysate at 50 µg

Lane 2:
MCF-7 Whole cell lysate at 50 µg

Lane 3:
HEK293T Whole cell lysate at 50 µg

Lane 4:
HeLa Whole cell lysate at 50 µg

Lane 5:
OVCAR-3 Whole cell lysate at 50 µg

Secondary

All lanes:
HRP-conjugated goat anti-rabbit IgG

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