abcam

ab176542

FITC Anti-TCR alpha + TCR beta antibody [R73]

Anti-TCR alpha + TCR beta antibody [R73] conjugated to FITC - suitable for flow cytometry, and reacts with rat samples. Clone [R73] is a mouse monoclonal antibody cited in 10 publications.

Design your panel with our interactive flow cytometry panel builder. Click here.

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.098% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing TCR beta protein. The exact immunogen used to generate this antibody is proprietary information.
Clone number	R73
Purification technique	Size-exclusion chromatography
Specificity	ab176542 recognizes TCR alpha/beta, the dominant subtype of T cell receptor expressed in peripheral blood.
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	This conjugate is made from a highly purified antibody (>95% by SDS-PAGE); free of unconjugated FITC.

Reactivity data

Flow Cyt

Tested

Species	Rat
Dilution info	1-3 µg/mL
Notes	-

Predicted

Species	Primates
Dilution info	-
Notes	-

Target data

See full target information TCR beta

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Store in the dark

Supplementary info

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

Activity summary	The T-cell receptor (TCR) alpha and TCR beta sometimes referred to as alpha beta TCR or alfa TCR are essential components of the immune response machinery. TCR alpha and beta chains each have a mass that varies between 30-40 kDa depending on the variable region's length. These receptor chains are expressed on the surface of T-cells more specifically on the vast majority of T lymphocytes and play a critical role in antigen recognition. Commercial names like anti-TCR or H57 might refer to antibodies targeting these chains.

Biological function summary	TCR alpha and beta chains form a heterodimeric complex with other important proteins like CD3 to transmit signals inside the T-cell upon antigen binding. This complex becomes active when T-cells recognize peptide antigens presented by major histocompatibility complex (MHC) molecules on antigen-presenting cells. The interaction between TCR and MHC-peptide complex initializes T-cell activation and subsequent immune responses being central to adaptive immunity.
Pathways	TCR alpha and beta are integral to the T-cell receptor signaling pathway. This pathway facilitates the activation of important transcription factors such as NF-kB and AP-1 which drive T-cell proliferation and differentiation. The signaling involves several other proteins such as protein kinase C theta and ZAP-70 which further propagate intracellular signaling cascades essential for a fully functional immune response.
Associated diseases and disorders	Mutations or malfunctions in TCR alpha and beta chains can associate with autoimmune disorders like rheumatoid arthritis and certain types of immunodeficiency. Rheumatoid arthritis involves aberrant TCR signaling pathways that result in inappropriate immune responses against self-antigens. In some immunodeficiencies defective TCR signaling impairs T-cell development and function potentially involving related proteins like CD3 and ZAP-70 leading to compromised immune defenses.

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

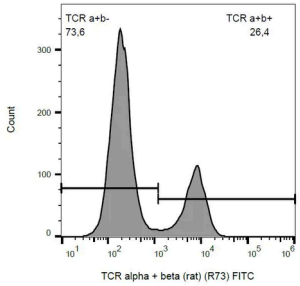
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Flow Cytometry - FITC Anti-TCR alpha + TCR beta antibody [R73] (ab176542)

TCR alpha + TCR beta Flow Cytometry staining using mouse Anti-TCR alpha + TCR beta antibody

Flow cytometry analysis (surface staining) of rat splenocytes with ab176542

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