

Store at -20C
#77046**TRBC1/TCR β constant region 1 Antibody**

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	30-40	Rabbit	#P01850	28639

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA and 50% glycerol. Store at -20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

TRBC1/TCR β constant region 1 Antibody recognizes endogenous levels of total TRBC1/TCR β constant region 1 protein. This antibody does not cross-react with TRBC2/TCR β constant region 2 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human TRBC1/TCR β constant region 1 protein. Antibodies are purified by peptide affinity chromatography.

Background

The $\alpha\beta$ T Cell Receptor (TCR) is a heterodimer composed of an alpha chain and a beta chain expressed on the surface of T cells (1,2). It detects peptide antigen presented by major histocompatibility complex (MHC) molecules (1,2). Detection of cognate antigen leads to activation of the TCR signaling pathway through the CD3 signaling chains that associate with the TCR (1). The TCR chains are made up of a constant region and variable regions that get rearranged during T cell development in the thymus (3). There are two TCR β constant genes, *TRBC1* and *TRBC2* (3). A population of normal T cells is polyclonal and contains a mix of TRBC1- and TRBC2-expressing T cells, while T cell malignancies are monoclonal and all express the same TCR which either contains TRBC1 or TRBC2 (4). Therefore, it is possible that T cell malignancies could be identified and targeted with reagents or therapies that can distinguish between TRBC1 and TRBC2 (4).

Background References

1. Kronenberg, M. et al. (1986) *Annu Rev Immunol* 4, 529-91.
2. Allison, J.P. et al. (1984) *Immunol Rev* 81, 145-60.
3. Saito, H. et al. *Nature* 309, 757-62.
4. Maciocia, P.M. et al. (2017) *Nat Med* 23, 1416-23.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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