



OCTOBER 2022

CBI Newsletter

Customers LOVE our TRBC1

&

Meet the CBI team at ICCS

TRBC1 - T Cell Clonality

Rapid, cost efficient & easy assessment for your assay

JOVI.1 is an antibody developed for CAR-T treatment of T-cell lymphoma, showing that the expression of **TRBC1** in healthy peripheral blood samples and peripheral T-cell lymphoma is significantly different.

Studies have shown that 25% - 47% of peripheral blood T cells express **TRBC1**.

Recently, several leading clinical laboratories evaluated important data for clonality using our **CBI JOVI.1** antibody for their **TRBC1** assay.

In fact, compared with NGS-based TCR γ PCR or V beta repertoire analysis, our **CBI** flow cytometric **TRBC1** assay can provide similar sensitivity & specificity, but much **faster results** and **lower costs**.

Application:

- The expression of TRBC1 can only be assessed in CD3-positive, TCR $\alpha\beta$ -positive T cells, therefore accurate gating of immunophenotypically distinct T-cell subsets is critical
- CD4/CD8-double negative populations should be divided into subsets of α/β and γ/δ -expressing T cell.
- Flow cytometric assessment of **TRBC1 expression** may be used to distinguish subsets of tumors that have obvious morphological overlap with other reactive or neoplastic processes

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TRBC1 conjugations:

APC	FITC	PE-CF594	iFluor™ 700	iFluor™ 488	PE- Cyanine7	APC- Cyanine7	APC-iFluor™ 700
Biotin	PE	PerCP	mFluor™ 450	iFluor™ 647	Purified	PE- Cyanine5	PerCP-Cyanine5.5

Free samples, 100tests, 200 tests

RUO & ASR available!

OCTOBER-2022

NEW PRODUCTS

Product	Size	Clone	Catalog #
CD45RA mFluor450	100Test	OTH-74D4	1087145
CD79b PE-Cyanine5	100Test	CB3-1	109875
CD15 APC-iFluor700	100Test	FUT4/815	1050175
PE1 PE	100Test	8E10	125325



Caprico Biotechnologies is committed to
100% customer satisfaction.

For more information

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Meet the CBI team at ICCS!
Booth #109



**CBI Poster Presentation by
Dr. Garfield Beckford (Head of the production)**

Monday, October 24th, 4 pm

Title: “Cross-linked APC Provides Longer Stability of Tandem Conjugate Reagent, But Native APC is More Suitable For Simple Conjugates in Flow Cytometry Application”

Cross-linked APC Provides Longer Stability of Tandem Conjugate Reagent, But Native APC is More Suitable For Simple Conjugates in Flow Cytometry Application.

Garfield Beckford, Yongxian Xu, Xin Guo, Runzhao Li
Caprico Biotechnologies, Inc. , Norcross, GA, United States

Allophycocyanin (APC) possesses subunits with an apparent quaternary structure. In many condition the disruption of the APC quaternary structure results in a reduced quantum efficiency. Cross-linked APC is highly fluorescent, with high molar absorptivity, and high quantum efficiency. However, the impact of the cross-linked APC for the simple conjugates or tandem conjugates on the performance of flow cytometry application is not well demonstrated. To fully understand the influence of the APC tertiary or quaternary structure material on the performance of the conjugate in flow cytometry application, non-cross-linked (native) APC and cross-lined APC are used for the conjugation of similar target antibody. The performance of individual conjugate in term of fluorescence intensity and spillover, and the performance in the multiple color flow cytometry application are tested. Our results have shown that non-cross-linked APC shows stronger MFI, less emission spill-over and improved long-term stability in simple single-color conjugates. However, cross-linked APC shows a significant stronger fluorescence intensity in tandem conjugates and maintains its MFI value significant longer under accelerated stability test conditions at 25°C, 37°C and 47°C; thus, suggesting that APC tandem conjugates prepared with cross-linked APC exhibit significantly improved long-term stability. Further test on varieties of antibody targets is warranted for future specific applications of simple single-color APC or APC-tandem dye conjugation.