Biomarker Datasheet

Human CD11c U-VUE® Biomarker

CD11c is one of four β2 integrins along with CD11a, CD11b and CD11d. CD11c, also known as integrin alpha X, is the most widely used defining marker for dendritic cells (DCs). It is a receptor for fibrinogen and functions in chemotaxis and cell adhesion. Integrins mediate myeloid cell recruitment from the blood vessels into tissue and lymph nodes and contribute to the immunological synapse between T cells and antigen presenting cells.

Overview

Target	Other names	Isotype	Primary cell type	Subcellular location	Positive control(s)
CD11c	ITGAX	Rabbit IgG	Myeloid-derived cells	Plasma membrane	Tonsil/ Spleen

*Clone available upon request

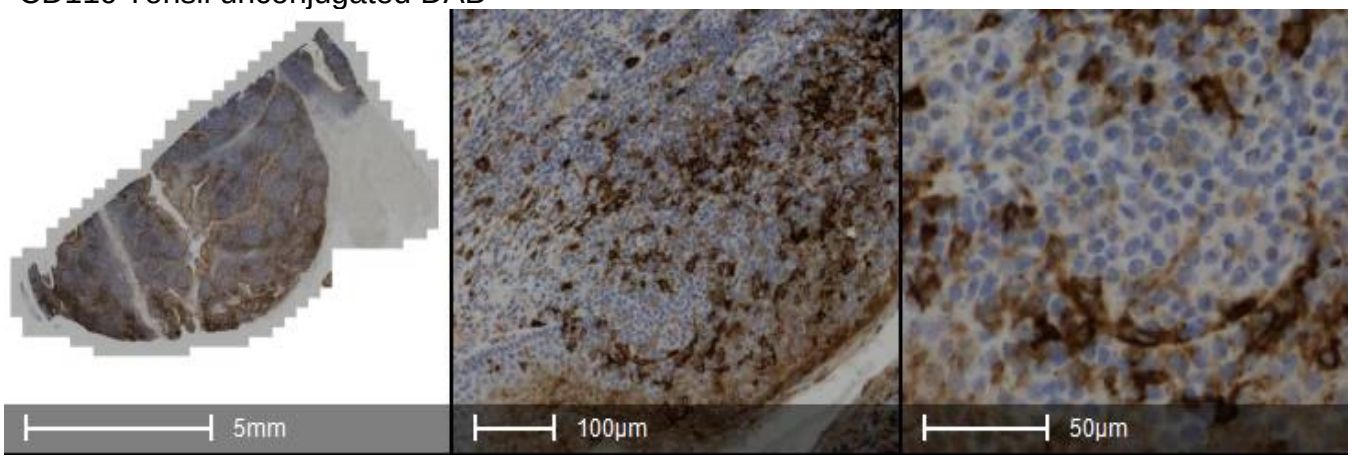
Quality Control

Each lot of antibody conjugate reagent is tested on positive control tissue and reviewed by reviewed by Ultivue's pathologists and scientists to ensure appropriate staining pattern and signal intensity by both qualitative and quantitative review.

Predicate Comparison

Serial sections of tonsil and tumor tissue controls were stained with traditional chromogenic DAB using unconjugated antibodies and with the InSituPlex® (ISP) monoplex assay to demonstrate concordance between staining modalities.

CD11c Tonsil unconjugated DAB



CD11c Tonsil ISP

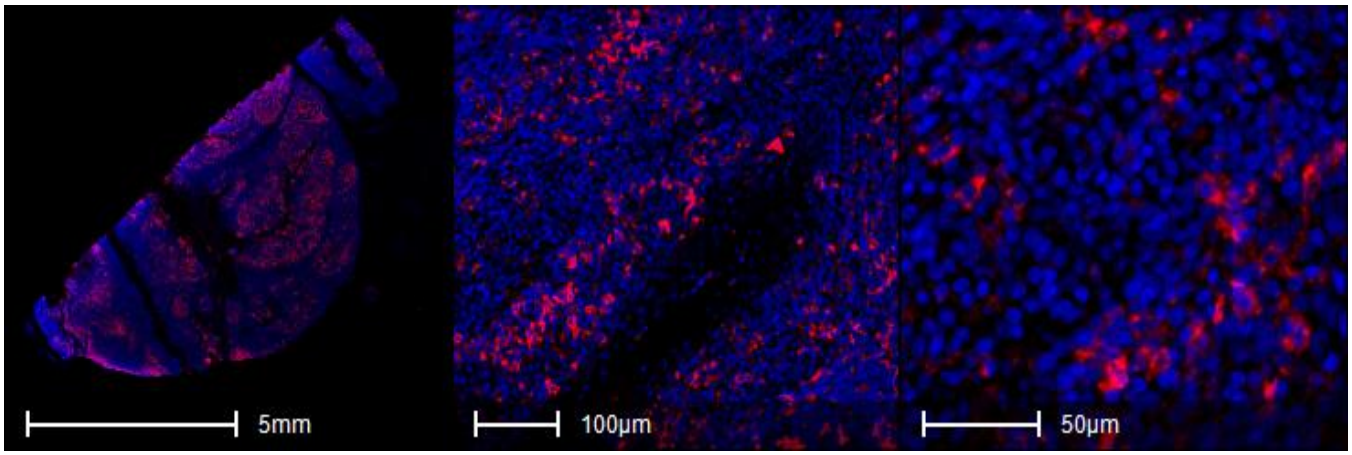


Figure 1: Comparison of unconjugated DAB and InSituPlex® monoplex assay in tonsil tissue. Chromogenic DAB (top panel), fluorescent ISP staining (bottom panel).

Assay Reproducibility

An InSituPlex® monoplex assay was performed across serial sections of tonsil and non-small cell lung carcinoma (NSCLC) tissue on the Leica BOND RX autostainer. Staining was found to be qualitatively and quantitatively equivalent across all slides in the run as demonstrated by coefficient of variance (CV) of positive cell density and signal intensity.

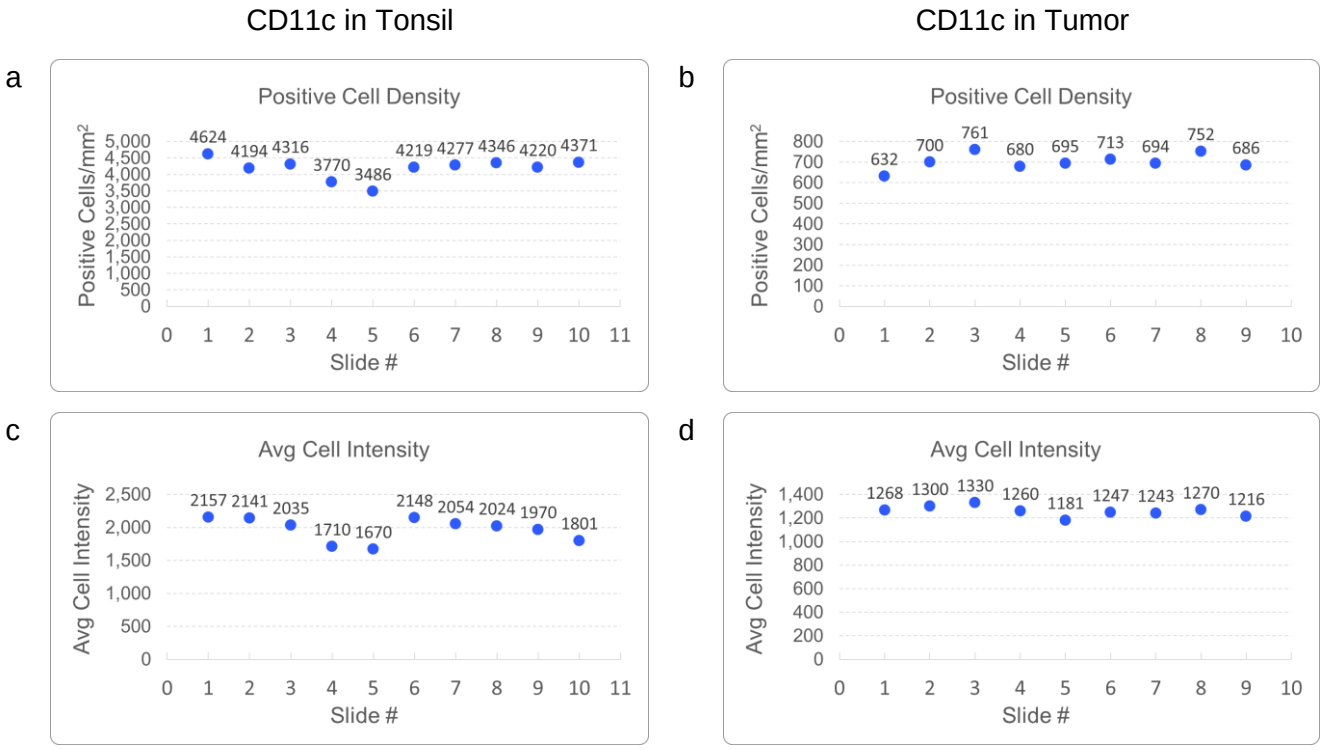


Figure 2: a. Number of positive cells/mm^2 per slide on tonsil tissue. Inter-slide coefficient of variance (CV) =7.3% **b.** Number of positive cells/mm^2 per slide on NSCLC tissue. Inter-slide CV = 5.2% **c.** Mean positive signal intensity per slide on tonsil tissue. Inter-slide CV = 8.7%. **d.** Mean positive signal intensity per slide on NSCLC tissue. Inter-slide CV = 3.3%.

References

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2. Garris, C. S., & Luke, J. J. (2020). Dendritic Cells, the T-cell-inflamed Tumor Microenvironment, and Immunotherapy Treatment Response. *Clinical cancer research: an official journal of the American Association for Cancer Research*, *26*(15), 3901–3907. https://doi.org/10.1158/1078-0432.CCR-19-1321
3. Su, Y., Tsagkozis, P., Papakonstantinou, A., Tobin, N. P., Gultekin, O., Malmerfelt, A., Ingelshed, K., Neo, S. Y., Lundquist, J., Chaabane, W., Nisancioglu, M. H., Leiss, L. W., Östman, A., Bergh, J., Sedimbi, S., Lehti, K., Lundqvist, A., Stragliotto, C. L., Haglund, F., & Ehnman, M. (2021). CD11c-CD8 Spatial Cross Presentation: A Novel Approach to Link Immune Surveillance and Patient Survival in Soft Tissue Sarcoma. *Cancers*, *13*(5), 1175. https://doi.org/10.3390/cancers13051175