

CASY^{VIVO} Cell Counter & Analyzer - Powering Breakthroughs in Cell Research

YAP1-TGFB Signaling Drives AR Loss in Prostate Fibroblasts

Brunner et al. (2026). Unraveling the YAP1-TGFB1 axis: a key driver of androgen receptor loss... **Journal of Experimental & Clinical Cancer Research**, 45:11. DOI: 10.1186/s13046-025-03290-y.

Fibroblasts; Mean Diameter; Biobank	
Index	CC19
Standardization	X
Counting	
Viability	
Volume	X

The Challenge:

The study addresses a lack of preclinical models for studying fibroblast heterogeneity and the poorly understood loss of stromal androgen receptor (AR) in aggressive prostate cancer, which is a known indicator of poor prognosis.

CASY's Contribution:

The CASY system was utilized to provide automated, high-precision determination of cell size (mean diameter) for various fibroblast cultures within the study's newly generated biobank. This physical characterization helped differentiate early-activated fibroblast substates from the larger, late-activated myofibroblastic (myCAF) population.

Key Benefits to Researchers:

Volumetric Precision: High-resolution measurement of cell diameter allowed for the objective differentiation of fibroblast subtypes based on their physical volume.

Phenotypic Validation: Quantified the significant increase in cell size that accompanies the transition from benign-like fibroblasts to the aggressive, onco-supportive myofibroblastic phenotype.

Standardized Monitoring: Enabled rapid, label-free quality control across a diverse collection of patient-matched samples to ensure technical consistency in the biobank.

CASY-generated data, illustrating that C3 (myCAF) cells exhibit a significantly larger mean diameter compared to patient-matched C1 and C2 fibroblast populations.

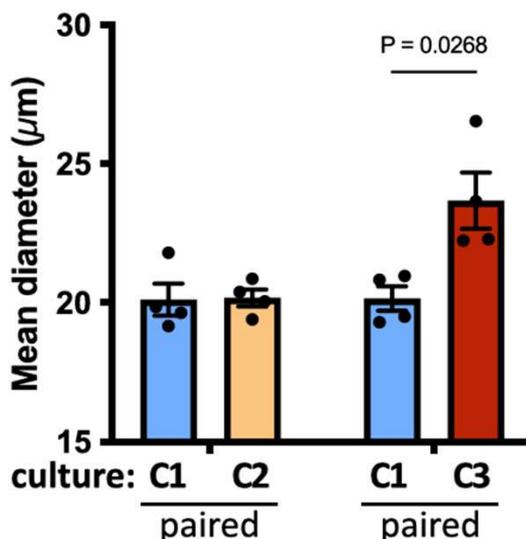


Fig. 4 Primary CAF cultures exhibit distinct functional hallmarks. Explant cultures displaying a C2 or C3 molecular profile and patient-matched C1 cultures were characterized via ... **B** cell size