

Quantification of Cell-Substrate Adhesion Area and Cell Shape Distributions in MCF7 Cell Monolayers

 Maciej Wakula¹, Anna Balcerak¹, Urszula Smietanka¹, Mateusz Chmielarczyk¹, Ryszard Konopiński¹, Ewa A. Grzybowska¹
¹Maria Skłodowska-Curie National Research Institute of Oncology

Corresponding Author

 Ewa A. Grzybowska
 Ewa.Grzybowska@coi.pl

Citation

 Wakula, M., Balcerak, A., Smietanka, U., Chmielarczyk, M., Konopiński, R., Grzybowska, E.A. Quantification of Cell-Substrate Adhesion Area and Cell Shape Distributions in MCF7 Cell Monolayers. *J. Vis. Exp.* (), e61461, doi:10.3791/61461 (2020).

Date Published

June 24, 2020

DOI

10.3791/61461

URL

jove.com/video/61461

Materials

Name	Company	Catalog Number	Comments
Alexa Fluor 594	ThermoFisher Scientific	A32740	goat anti-rabbit, 1:500
Ammonium chloride	Sigma	A9434	
BSA	BioShop	ALB001.500	
Collagen from calf skin	Sigma	C9791-10MG	
DAPI	Sigma	D9542	1:10000 (stock 1 mg/mL in H ₂ O), nucleic acid staining
DMEM + GlutaMAX, 1 g/L D-Glucose, Pyruvate	ThermoFisher Scientific	21885-025	
FBS	ThermoFisher Scientific	10270-136	
Junction plakoglobin	Cell Signaling	2309S	rabbit, 1:400
Laminar-flow cabinet class 2	Alpina		standard equipment
MCF7-basedHAX1KD cell line	Cell line established in the National Institute of Oncology, Warsaw, described in Balcerak et al., 2019		MCF7 cell line withHAX1knockdown
MCF7 cell line (CONTROL)	ATCC	ATCC HTB-22	epithelial, adherent breast cancer cell line
Olympus CK2 light microscope	Olympus		
Paxillin	Abcam	ab32084	rabbit, 1:250, Y113
PBS	ThermoFisher Scientific	10010023	
Phalloidin-TRITC conjugate	Sigma	P1951	1:400 (stock 5 mg/mL in DMSO), actin labeling
PTX	Sigma	T7402-1MG	
TBST – NaCl	Sigma	S9888	
TBST – Trizma base	Sigma	T1503	
Triton X-100	Sigma	9002-93-11	
Zeiss LSM800 Confocal microscope	Zeiss		