

Cancer cell capture performance of Polymer CTC Chip



Cancer cell line	Capture target	*Capture efficiency	Medium	Reference
Colon				
HCT116	EpCAM	91%	PBS	Kure, K. et al. Oncol Lett. 19, 2286-2294 (2020)
		65%	Whole blood	↑
		80%	Whole blood	Ishibashi, R. et al. Oncol Lett. 18, 6397-6404 (2019)
Prostate				
PC3	EpCAM	95%	PBS	Obayashi, K. et al. Prostate International 7, 131-138 (2019)
		84%	Whole blood	↑
LNCaP	EpCAM	83%	PBS	↑
		76%	Whole blood	↑
Breast				
MCF 7	EpCAM	92%	PBS	Shimada, Y. et al. Mol Clin Oncol. 4, 599-602 (2016)
		92%	Whole blood	↑
SKBR3	EpCAM	85%	PBS	↑
	HER2	90%	PBS	Toyama idustrial technology center annual report (2018)
MDA-MB-231	EGFR	73%	PBS	Ohnaga, T. et al. Sci Rep. 8, 12005 (2018)
Lung				
PC-9	EpCAM	100%	PBS	Chikaishi, Y. et al. Oncol Rep. 37, 77-82 (2017)
		88%	Whole blood	↑
A549	cell surface vimentin	88%	PBS	Kanayama, M. et al. Oncol Rep. 52, 156-161 (2024)
Esophagus				
KYSE220	EpCAM	92%	PBS	Shimada, Y. et al. Mol Clin Oncol. 4, 599-602 (2016)
		73%	Whole blood	↑
KYSE150	EpCAM	91%	PBS	↑
KYSE510	EpCAM	95%	PBS	↑
Pancreas				
MIA PaCa-2	EGFR	90%	PBS	Toyama idustrial technology center annual report (2019)
BxPC-3	EGFR	77%	PBS	↑
Mesothelioma				
ACC-MESO-4	podoplanin	78%	PBS	Chikaishi, Y. et al. Oncol Rep. 37, 77-82 (2017)
		100%	PBS	Yoneda, K. et al. Cancer Sci. 110, 726-733 (2019)
		84%	Whole blood	↑
H226	podoplanin	76%	Whole blood	↑
ACC-MESO-1	EGFR, podoplanin	100%	PBS	Kanayama, M. et al. Oncol Lett. 22, 522-530 (2021)

*Capture efficiency: (Number of cancer cells captured by the device) / (Number of cancer cells flowing into the device) x 100%