

# Predicting Pleural Metastasis by Detecting CD55 Using An Ultrasound-enhanced Scintillation Proximity Assay

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Complement decay-accelerating factor, also known as CD55, is a membrane protein that regulates the complement system on the cell surface. We have previously demonstrated that <sup>177</sup>Lu-labeled CD55 antibody is a promising theranostic agent for pleural metastatic lung cancer, suggesting that CD55 may serve as a useful biomarker in the diagnosis of pleural metastasis. In this study, we used an ultrasound-enhanced scintillation proximity assay to accurately determine the levels of CD55 for the early detection and assessment of the progression of pleural metastatic lung cancer in a mouse model. We found that the expression of CD55 in metastatic tumor tissues is 2.8 times higher than that in the serum at the early stages. We also found that the concentration of CD55 in serum decreases with the progression of metastasis (0.3 times lower on day 18 than on day 0). These results suggest that CD55 is a potential biomarker for the prediction of pleural metastatic lung cancer.

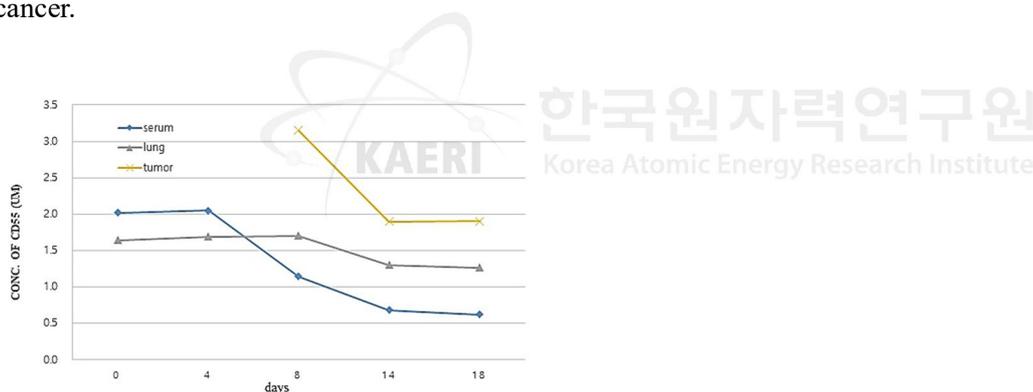


Fig. 1. Changes in the expression level of CD55 in the serum, lungs, and tumors.

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