

## SPR Imaging and AFM Analysis of S100A6-Antibody Interaction

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### Abstract

Calcyclin (S100A6) is a cell-specific, calcium binding protein of the S100 family whose expression is augmented in many types of cancer. Detection of the interaction was performed using a surface plasmon resonance (SPR) and SPR imaging technique. The GST-fused S100A6 protein was layered onto the glutathione (GSH)-modified gold chip surface. The specific binding of GST-S100A6 protein onto the gold chip surface was facilitated through the affinity of GST to its specific ligand GSH. To analyze the surface of the gold chip on each steps, we analyzed the chip surface by using an atomic force microscope (AFM).

### References

1. Wieslawa Lesniak, Anna Szczepanska and Jacek Kuznicki, Calcyclin (S100A6) expression is stimulated by agents evoking oxidative stress via the antioxidant response element (2005), *Biochimica et Biophysica Acta*, **1744**, 29-37.
2. Jin-Mi Jung, Yong-Beom Shin, Min-Gon Kim, Hyeon-Su Ro, Hee-Tae Jung, and Bong Hyun Chung, A fusion protein expression analysis using surface plasmon resonance imaging (2004), *Analytical Biochemistry*, **330**, 251-256.