SPR signals enhancement by gold nanorods for cell surface marker detection

Farzaneh Fathi1,2, Roghayeh Jalili3, Mohammad Amjadi1, Mohammad-Reza Rashidi1,4*

1Research Center for Pharmaceutical Nanotechnology, Tabriz University of Medical Sciences, Tabriz, Iran
2Student Research Committee, Tabriz University of Medical Sciences, Tabriz, Iran
3Department of Analytical Chemistry, Faculty of Chemistry, University of Tabriz, Tabriz, Iran
4Faculty of Pharmacy, Tabriz University of Medical Sciences, Tabriz, Iran

Methods:

Flow cytometry assay

Prior to flow cytometry analysis, cells were collected by 0.25% Trypsin-EDTA solution. Following centrifugation at 1500 rpm for 10 min and washing with PBS, the cells were blocked with 1% BSA for 20 min. Then, 1 µl of Alexa Fluor488-conjugated anti-human VE-cadherin antibody was added to cell solution and incubated for 1h at 4°C. After washing twice, flow cytometry analysis was performed using a FACSCalibur (BD Bioscience) system and data were processed by FlowJo software ver.7.6.1.
Fig. S1. (A) VE-cadherin immobilization on gold chip (B) related sensograms for HUVEC cell injection (flow rate: 20 µl/min and time: 5 min) on three different surface of gold chips (black curve: bare gold surface, green curve: VE- cadherin coated chip and red curve BSA coated chip) (C) Flow cytometric analysis of VE-cadherin expression on HUVEC cells (red curve: isotype control and green curve: HUVECs cells) (D) Angle shift of SPR curves in immobilization step.
Fig. S2. Hydrodynamic diameter distribution plots as determined by DLS measurements for GNR-Strep.