ONLINE ISSN : 1348-2246
PRINT ISSN : 0910-6340

Analytical Sciences
Vol. 26 (2010) , No. 7 p.767

[PDF (469K)] [References] [Supplementary Materials]

Luminol Encapsulated Liposome as a Signal Generator for the Detection of Specific Antigen-antibody Reactions and Nucleotide Hybridization

Pakavadee RAKTHONG[1)], Akarin INTARAMAT[2)] and Kavi RATANABANANGKOON[1)2)]

1) Department of Microbiology, Faculty of Science, Mahidol University
2) Chulabhorn Research Institute and Chulabhorn Graduate Institute

(Received March 3, 2010)
(Accepted May 10, 2010)

Liposomes prepared with biotinylated phospholipids and luminol entrapped were shown to be of 187 nm in size, 59% of which were unilamellar and with 43% luminol trapping efficiency. Liposome prepared from biotinylated phospholipids with a longer hydrophilic PEG2000 spacer, but not with the shorter hydrophobic caproyl one, bound efficiently and specifically with immobilized streptavidin in a microplate assay. The interactions of dinitrophenol and tobramycin with their respective antibodies, and the hybridization of 20-mers oligonucleotides were studied using the liposome as a signal generator. These reactions were shown to be specific with limits of detection of 0.58 μM, 0.96 μM and 18 nM, respectively.

[PDF (469K)] [References] [Supplementary Materials]

Download Meta of Article[Help]
RIS
BibTeX

To cite this article:
Pakavadee RAKTHONG, Akarin INTARAMAT and Kavi RATANABANANGKOON,

Anal. Sci., Vol. *26*, p.767, (2010) .

doi:10.2116/analsci.26.767
JOI JST.JSTAGE/analsci/26.767