

Conference Abstract

Validation of a novel HPLC-based serum thymidine

ACCESS

OPEN

kinase assay for breast cancer detection

Elena Kuzmanova[‡], Marilena Spanou[‡], Emma Leckie[‡], Nikolai Zhelev[‡]

‡ Abertay University, Dundee, United Kingdom

Corresponding author: Nikolai Zhelev (<u>n.zhelev@abertay.ac.uk</u>)

Academic editor: Daniella Zheleva

Received: 16 Jun 2017 | Accepted: 28 Jun 2017 | Published: 05 Jul 2017

Citation: Kuzmanova E, Spanou M, Leckie E, Zhelev N (2017) Validation of a novel HPLC-based serum thymidine kinase assay for breast cancer detection. BioDiscovery 20: e14563. https://doi.org/10.3897/biodiscovery.20.e14563

Abstract

Thymidine kinase (TK) has been validated as a serum-derived, tumour-associated marker for a number of malignancies and estimation of TK activity in serum has proved useful for clinical diagnosis and monitoring of therapy. However, the use of this biomarker in the clinical practice is constrained by the lack of an automatable easy-to-perform assay. We have developed and validated a novel HPLC-based assay for measuring TK activity in biological samples. This assay is cheaper, easy to perform and does not depend on the use of expensive antibodies or isotopes. In addition, it has comparable sensitivity with the radioenzymatic assay used in the clinical practice. The assay has been evaluated with samples from breast cancer patients.

Keywords

Thymidine kinase, tumour-associated marker, breast cancer

Presenting author

Elena Kuzmanova

© Kuzmanova E et al. This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.