

external link (opens in a new window)

Search Sources Analytics Alerts My list Settings Live Chat Help Tutorials

Quick Search

Search

Back to results | < Previous 91 of 186 Next >

[Link to Full Text](#) | [View at publisher](#) | [Download](#) | [Export](#) | [Print](#) | [E-mail](#) | [Create bibliography](#) | [Add to My List](#)

Acta Medica Iranica

Volume 45, Issue 1, 2007, Pages 7-12

In vitro semi-quantitative determinataion of human gamma-interferon expression by RT-PCR

Zamani, A.R.^a, Sadeghian, S.^a, Tavakkol-Afshari, J.^b, Nasiri, E.^a^a Department of Immunology, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran^b Department of Immunology, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

Abstract

[View references \(20\)](#)

Secreted cytokines of Th1 (T-helper)/Th2 cells play an important role in the pathogenesis of many diseases. Th1 cells secrete predominantly IFN- γ and IL-2 which regulate cell-mediated immunity against intracellular pathogens and tumors. In this study, expression of IFN- γ was studied using semi-quantitative RT-PCR. In brief, lymphocytes of a healthy donor were stimulated with PHA ($1\mu\text{g}/10^6$ cell/ml) in cell culture at different incubation times (0, 4, 8, 12, 24, 48 and 72 hours) to express IFN- γ . Total RNA was extracted and cDNA synthesized. A sequence (273 bp) between two oligonucleotide primers (chosen from two different exons of the IFN- γ gene sequences) was amplified using a heat-stable DNA polymerase. In semi-quantitative RT-PCR, we used a serial dilution (1/2, 1/4, ...) for cDNA in order to determine the titer of cDNA which gives visible band in agarose gel (2%) electrophoresis. Results show the highest level of IFN- γ expression was achieved after 4 hours activation with PHA and it was stable at least for 22 hours. Then it fell to baseline level. © 2007 Tehran University of Medical Sciences. All rights reserved.

Reaxys Database Information

|

Author keywords

IFN- γ ; PHA; RT-PCR; Semi-quantitative

Indexed Keywords

EMTREE drug terms: complementary DNA; DNA polymerase; gamma interferon; hemagglutinin; RNA

EMTREE medical terms: agar gel electrophoresis; article; controlled study; dilution; DNA synthesis; enzyme stability; exon; gene amplification; gene expression; gene sequence; human; human cell; human cell culture; incubation time; interferon production; lymphocyte culture; normal human; quantitative analysis; reverse transcription polymerase chain reaction; RNA extraction; thermostability

Chemicals and CAS Registry Numbers: DNA polymerase, 37217-33-7; gamma interferon, 82115-62-6; hemagglutinin, 37333-12-3; RNA, 63231-63-0

ISSN: 00446025 CODEN: AMEIA Source Type: Journal Original language: English

Document Type: Article

References (20)

[View in table layout](#)
[Page](#) | [Export](#) | [Print](#) | [E-mail](#) | [Create bibliography](#)

1 Abbas, A.K., Lichman, A.H., Pober, J.S. (2000) Cellular and molecular immunology, pp. 260-261. Cited 1557 times. Forth edition. Philadelphia: W. B. Saunders Co.; P

[Link to Full Text](#)

2 Roitt I, Brostoff J, Male D. Immunology. Sixth edition, London: Mosby; 2001. P. 117.

[Link to Full Text](#)

Cited by since 1996

This article has been cited 0 times in Scopus.

Inform me when this document is cited in Scopus:

[Set alert](#) | [Set feed](#)

Related documents

Showing the 2 most relevant related documents by all shared references:

Schmidt, P., Kühn, C., Maillard, J.-C. **A comprehensive survey for polymorphisms in the bovine IFN- γ gene reveals a highly polymorphic intronic DNA sequence allowing improved genotyping of bovine** (2002) *Journal of Interferon and Cytokine Research*

Benveniste, O., Martin, M., Villinger, F. **Techniques for quantification of cytokine mRNAs** (1998) *Cytokines, Cellular and Molecular Therapy*

[View all related documents based on all shared references](#) or [select the shared references to use](#)

Find more related documents in Scopus based on:

[Authors](#) | [Keywords](#)

More By These Authors

The authors of this article have a total of **95 records** in Scopus: (Showing 5 most recent)

Malekshah, O.M., Lage, H., Bahrami, A.R., Afshari, J.T., Behravan, J.

PXR and NF- κ B correlate with the inducing effects of IL-1 and TNF- α on ABCG2 expression in breast cancer cell lines (2012) *European Journal of Pharmaceutical Sciences*

Mohajertehran, F., Afshari, J.T., Rezaieyazdi, Z., Ghomian, N.

Association of single nucleotide polymorphisms in the

[Add apps](#) | [Help](#)