

Mouse Interferon gamma ELISPOT Kit ab64029

2 References

Overview

Product name Mouse Interferon gamma ELISPOT Kit

Detection method Colorimetric

Sample type Suspension cells

Assay type Sandwich (qualitative)

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Mouse

Product overview The ELISPOT assay is designed to enumerate cytokine producing cells in a single cell suspension. This method has the advantage of requiring a minimum of in-vitro manipulations allowing cytokine production analysis as close as possible to in-vivo conditions in a highly specific way. This technique is designed to determine the frequency of cytokine producing cells under a given stimulation, and the follow-up of such frequency during a treatment and/or a pathological state. Elispot assay constitutes an ideal tool in the TH1 / TH2 response, vaccine development, viral infection monitoring and treatment, cancerology, infectious diseases, autoimmune diseases and transplantation.

Abcam Elispot assay is based on sandwich immuno-enzyme technology. Cell secreted cytokines or soluble molecules are captured by coated antibodies avoiding diffusion in supernatant, protease degradation or binding on soluble membrane receptors. After cell removal, the captured cytokines are revealed by tracer antibodies and appropriate conjugates.

Principle

After cell stimulation, locally produced cytokines are captured by a specific monoclonal antibody. After cell lysis, trapped cytokine molecules are revealed by a secondary biotinylated detection antibody, which is in turn recognised by streptavidin conjugated to alkaline phosphatase. PVDF-bottomed-well plates are then incubated with BCIP/NBT substrate. Colored "purple" spots indicate cytokine production by individual cells.

Recognizes natural murine Interferon gamma.

Tested applications **Suitable for:** ELISpot

Platform Microplate

Properties

Storage instructions Store at +4°C. Please refer to protocols.

Components	1 x 96 tests	5 x 96 tests
Bovine Serum Albumin	1 x 2g	1 x 2g
IFN γ Biotinylated detection antibody	1 x 100 μ l	1 vial
Mouse IFN γ Pre-coated 96-well PVDF-bottomed plates	1 unit	5 units
Ready-to-use BCIP/NBT substrate buffer	1 x 11ml	2 x 25ml
Streptavidin - Alkaline Phosphatase conjugated	1 x 10 μ l	1 x 50 μ l

Function Produced by lymphocytes activated by specific antigens or mitogens. IFN-gamma, in addition to having antiviral activity, has important immunoregulatory functions. It is a potent activator of macrophages, it has antiproliferative effects on transformed cells and it can potentiate the antiviral and antitumor effects of the type I interferons.

Tissue specificity Released primarily from activated T lymphocytes.

Involvement in disease In Caucasians, genetic variation in IFNG is associated with the risk of aplastic anemia (AA) [MIM:609135]. AA is a rare disease in which the reduction of the circulating blood cells results from damage to the stem cell pool in bone marrow. In most patients, the stem cell lesion is caused by an autoimmune attack. T-lymphocytes, activated by an endogenous or exogenous, and most often unknown antigenic stimulus, secrete cytokines, including IFN-gamma, which would in turn be able to suppress hematopoiesis.

Sequence similarities Belongs to the type II (or gamma) interferon family.

Post-translational modifications Proteolytic processing produces C-terminal heterogeneity, with proteins ending alternatively at Gly-150, Met-157 or Gly-161.

Cellular localization Secreted.

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab64029 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ELISpot		Use at an assay dependent dilution.

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