in vitro MDSC-T cell immunosuppression assay

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SCOPE OF THE METHOD

The Method relates to	Human health
The Method is situated in	Translational - Applied Research
Type of method	In vitro - Ex vivo
This method makes use of	Animal derived cells / tissues / organs
Species from which cells/tissues/organs are derived	Mice
Type of cells/tissues/organs	Tcells derived from spleen of naive mice and Myloid cells derived from bone marrow of naive mice

DESCRIPTION

Method keywords

in vitro assay
Coculture
immune response
flow cytometry
cell proliferation

Scientific area keywords

Oncology
Immunology
cancer treatment
immunotherapy

Method description

Myeloid progenitor cells derived from the bone marrow of mice are stimulated using a cytokine mixture to become myeloid derived suppressor cell (MDSC) like cells. These are co-cultured with activated CD8+ T-cells derived from a mouse spleen. The MDSC like cells will suppress the proliferation of the T-cells in co-culture which can be observed by staining the CD8+ T-cells using a proliferation dye and flow cytometry. This assay can then be used to screen immunotherapeutic compounds on their capacity to reduce the immunosuppressive effects of MDSC.

Lab equipment

Sterile cell culture lab
Flow cytometer

Method status

History of use

Published in peer reviewed journal

REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

References

Baert et al. Front Immunol 2019

Associated documents

PARTNERS AND COLLABORATIONS

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