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A new tool to measure pyroptosis: Gasdermin D (mouse) ELISA kit

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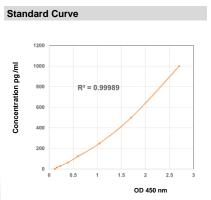
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Introduction

Pyroptosis is an inflammatory programmed cell death that is initiated in response to pathogen- or host-derived perturbations of the cytosol. Pyroptosis is induced by inflammatory caspases, such as caspase-1 and -11 in mice that are activated by a high molecular weight complex, called inflammasomes. Gasdermin D (GSDMD) is the central mediator of pyroptotic cell death downstream of both caspase-1 and caspase-11. GSDMD is cleaved by these caspases into a 31 kDa N-terminal fragment (GSDMDNterm) that forms pores into the plasma membrane and a 22 kDa C-terminal fragment (GSDMDCterm). We present here the data obtained with a new Gasdermin D (mouse) ELISA kit based on antibodies developed against the C-terminal fragment of Gasdermin D (mouse).

Results

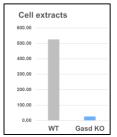


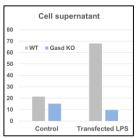


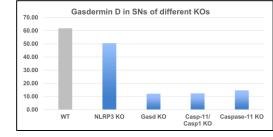
Specifications:

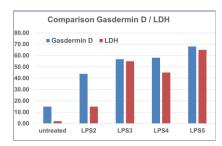
- Sandwich ELISA
- Validated on WT and Gasdermin -/- samples
- Validated on WT and Caspase 11 or 1 -/- samples
- Detects Mouse Gasdermin D in cell culture supernatant
- Range: 0 to 1000 pg/ml
- Sensitivity (LOD): 14 pg/ml
- Intra-Assay: <5%
- Inter-Assay: <7%

Detection of Gasdermin D (mouse) in mouse Bone Marrow-Derived Macrophages (BMDMs) using the Gasdermin D (mouse) ELISA kit (AG-45B-0011)



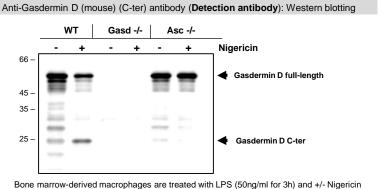


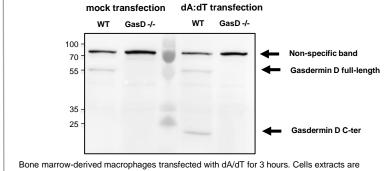




BMDMs are lysed and analysed.

BMDMs are treated for 4h with LPS alone (Control) or different types of LPS transfected (LPS 2, 3, 4 and 5). Supernatants are analysed.





Anti-Gasdermin D (mouse) (C-ter) antibody (Capture antibody): Western blotting

Conclusions

(5µM for 2.5h), Cells extracts are analysed.

- 1) New antibodies to Gasdermin D (mouse) (C-ter) have been developed. They detect Gasdermin D (mouse) full-length and cleaved C-terminus fragment by WB.
- 2) Antibodies are specific as validated by using Gasdermin D -/- or Asc -/- extracts by Western blotting (WB).
- 3) Using the antibodies to Gasdermin D (mouse) (C-ter), a new ELISA Kit has been developed to detect secreted Gasdermin D (mouse) in cell culture supernatants.
- 4) Gasdermin D (mouse) ELISA kit detects specifically Gasdermin D as validated by using supernatants from Gasdermin D -/- or Caspase 11 -/- samples.