

In the format provided by the authors and unedited.

Electrophilic properties of itaconate and derivatives regulate the $\text{I}\kappa\text{B}\zeta$ –ATF3 inflammatory axis

Monika Bambouskova¹, Laurent Gorvel¹, Vicky Lampropoulou¹, Alexey Sergushichev², Ekaterina Loginicheva¹, Kendall Johnson³, Daniel Korenfeld¹, Mary Elizabeth Mathyer⁴, Hyeryun Kim³, Li-Hao Huang¹, Dustin Duncan⁵, Howard Bregman³, Abdurrahman Keskin⁶, Andrea Santeford⁷, Rajendra S. Apte⁷, Raghav Sehgal⁸, Britney Johnson¹, Gaya K. Amarasinghe¹, Miguel P. Soares⁹, Takashi Satoh¹⁰, Shizuo Akira¹⁰, Tsonwin Hai¹¹, Cristina de Guzman Strong⁴, Karine Auclair⁵, Thomas P. Roddy³, Scott A. Biller³, Marko Jovanovic⁶, Eynav Klechevsky¹, Kelly M. Stewart³, Gwendalyn J. Randolph¹ & Maxim N. Artyomov^{1*}

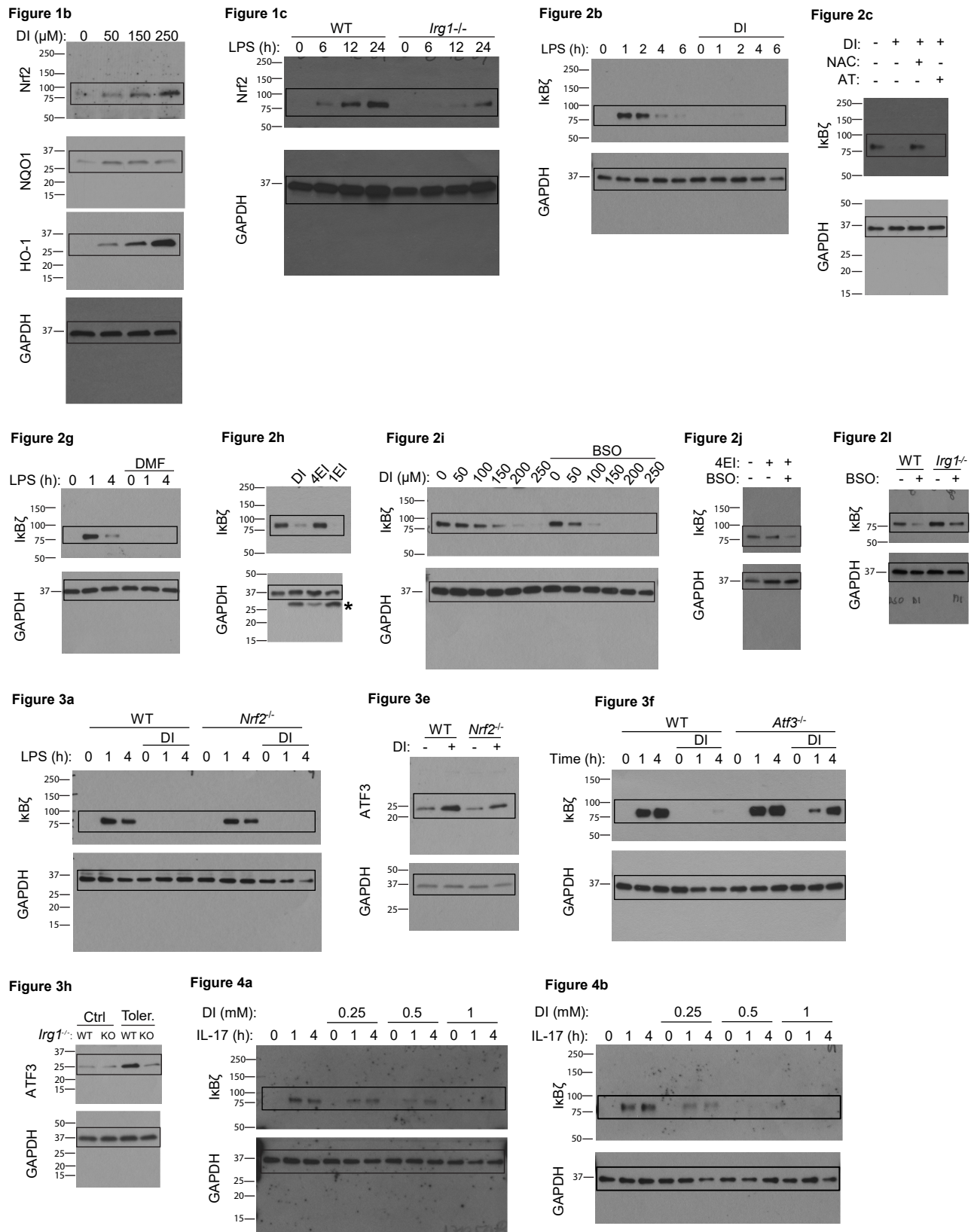
¹Department of Pathology and Immunology, Washington University School of Medicine, St. Louis, MO, USA. ²Computer Technologies Department, ITMO University, Saint Petersburg, Russia.

³Agius Pharmaceuticals, Cambridge, MA, USA. ⁴Division of Dermatology, Center for Pharmacogenomics, Center for the Study of Itch, Department of Medicine, Washington University School of Medicine, St. Louis, MO, USA. ⁵Department of Chemistry, McGill University, Montreal, Quebec, Canada. ⁶Department of Biological Sciences, Columbia University, New York, NY, USA. ⁷Department of Ophthalmology and Visual Sciences, Washington University School of Medicine, St. Louis, MO, USA. ⁸Elucidata Corporation, Cambridge, MA, USA. ⁹Instituto Gulbenkian de Ciência, Oeiras, Portugal.

¹⁰Host Defense, Immunology Frontier Research Center, Osaka University, Suita, Japan. ¹¹Department of Biological Chemistry and Pharmacology, Ohio State University, Columbus, OH, USA.

*e-mail: martyomov@wustl.edu

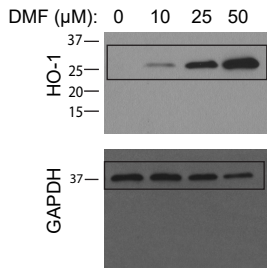
Supplementary Figure 1. Western blot source data with size marker indications.



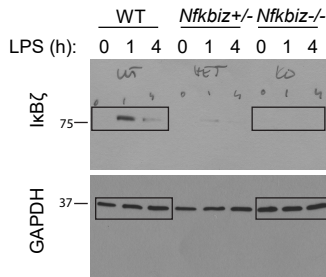
All data are uncropped and unprocessed scans of original films.

*Asterisk indicates signal reminiscent from previous staining of the membrane with different antibody

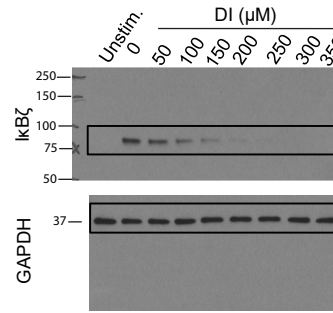
Ext. Data Fig. 1j



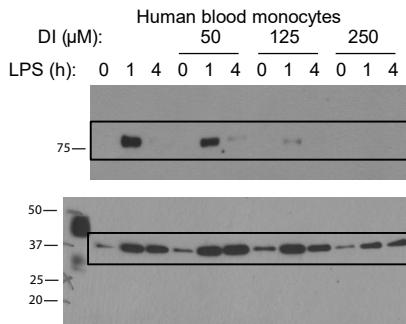
Ext. Data Fig. 2a



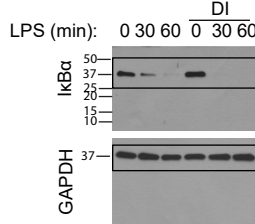
Ext. Data Fig. 2e



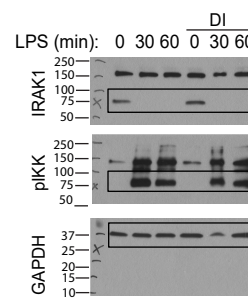
Ext. Data Fig. 2g



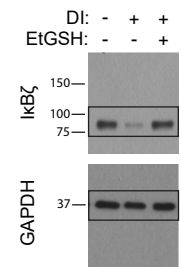
Ext. Data Fig. 2h



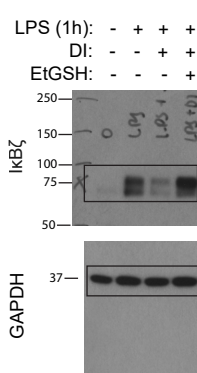
Ext. Data Fig. 2i



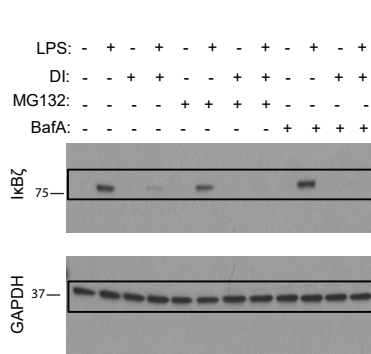
Ext. Data Fig. 2k



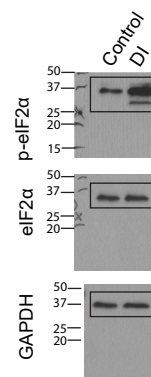
Ext. Data Fig. 2l



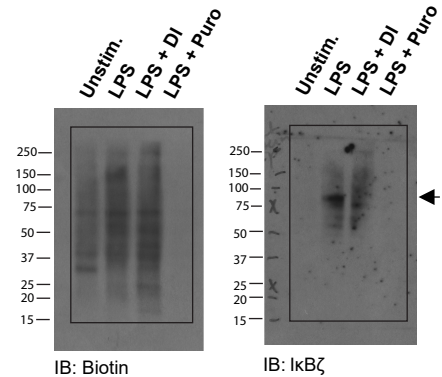
Ext. Data Fig. 3b



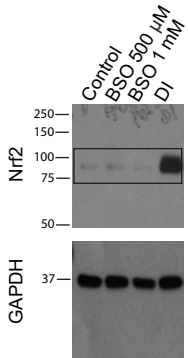
Ext. Data Fig. 3d



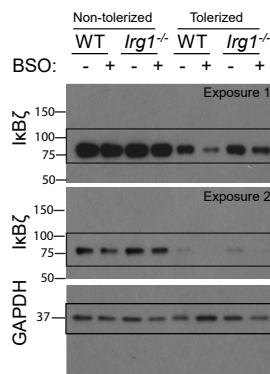
Ext. Data Fig. 3e



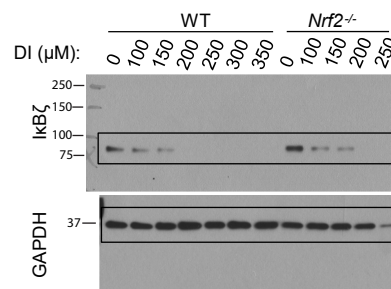
Ext. Data Fig. 4a



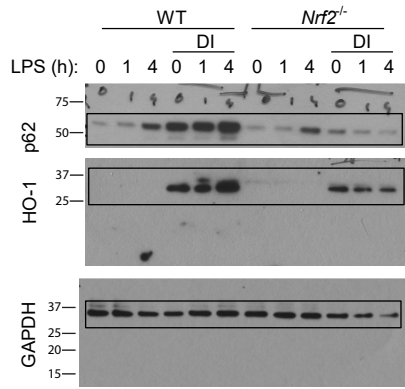
Ext. Data Fig. 4f



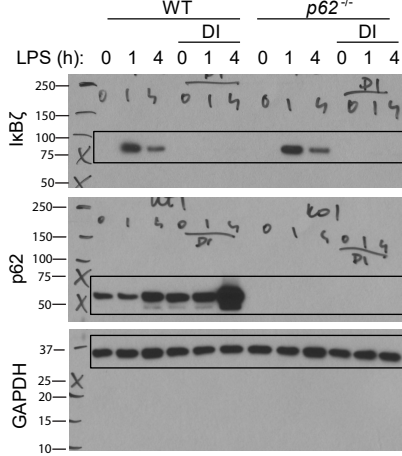
Ext. Data Fig. 5a



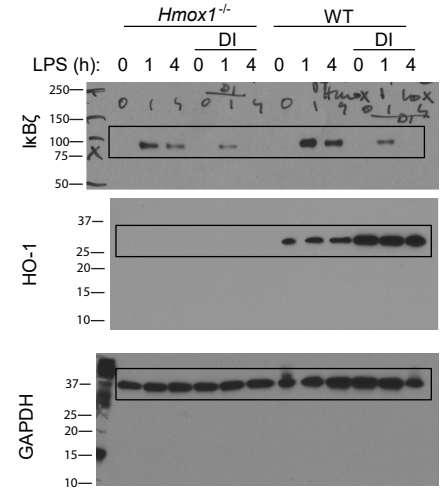
Ext. Data Fig. 5b



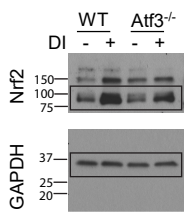
Ext. Data Fig. 5c



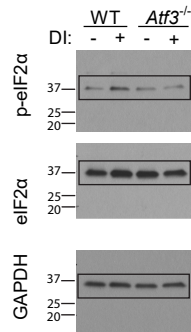
Ext. Data Fig. 5d



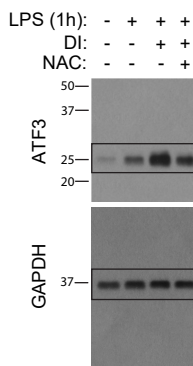
Ext. Data Fig. 5g



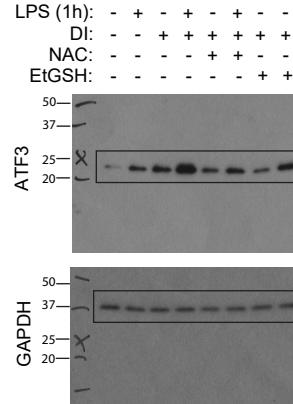
Ext. Data Fig. 5h



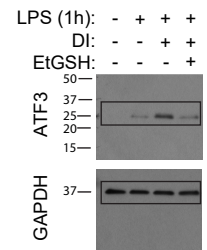
Ext. Data Fig. 5i



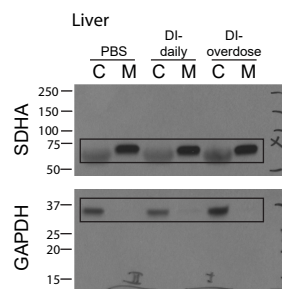
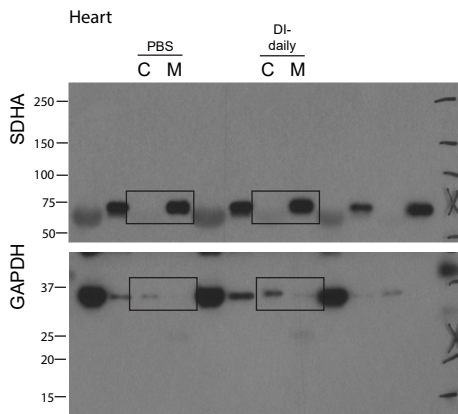
Ext. Data Fig. 5j

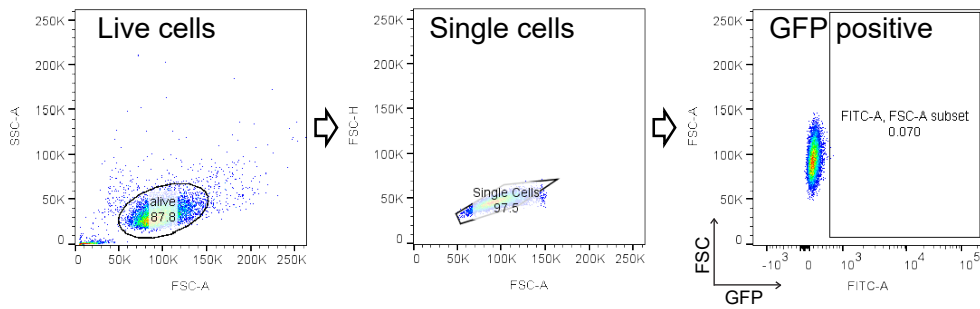


Ext. Data Fig. 5k



Ext. Data Fig. 7c





Supplementary Figure 2. Flow cytometry gating. Dead cells and debris were gated out based on FSC and SSC. Next, single cells were gated based on FSC. Final dot plots indicate FCS versus GFP signal. GFP negative cells (non-transduced BV2 as shown) were used to set the gate for GFP positive cells.