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# **Reporting Summary**

Nature Research wishes to improve the reproducibility of the work that we publish. This form provides structure for consistency and transparency in reporting. For further information on Nature Research policies, see <u>Authors & Referees</u> and the <u>Editorial Policy Checklist</u>.

When statistical analyses are reported, confirm that the following items are present in the relevant location (e.g. figure legend, table legend, main

### Statistical parameters

text, or Methods section).				
n/a	Confirmed			
	The exact sample size (n) for each experimental group/condition, given as a discrete number and unit of measurement			
	An indication of whether measurements were taken from distinct samples or whether the same sample was measured repeatedly			
	The statistical test(s) used AND whether they are one- or two-sided Only common tests should be described solely by name; describe more complex techniques in the Methods section.			
	A description of all covariates tested			
	A description of any assumptions or corrections, such as tests of normality and adjustment for multiple comparisons			
	A full description of the statistics including <u>central tendency</u> (e.g. means) or other basic estimates (e.g. regression coefficient) AND <u>variation</u> (e.g. standard deviation) or associated <u>estimates of uncertainty</u> (e.g. confidence intervals)			
	For null hypothesis testing, the test statistic (e.g. $F$ , $t$ , $r$ ) with confidence intervals, effect sizes, degrees of freedom and $P$ value noted Give $P$ values as exact values whenever suitable.			
	For Bayesian analysis, information on the choice of priors and Markov chain Monte Carlo settings			
	For hierarchical and complex designs, identification of the appropriate level for tests and full reporting of outcomes			
	Estimates of effect sizes (e.g. Cohen's <i>d</i> , Pearson's <i>r</i> ), indicating how they were calculated			
	Clearly defined error bars State explicitly what error bars represent (e.g. SD, SE, CI)			

Our web collection on statistics for biologists may be useful.

### Software and code

Policy information about availability of computer code

Data collection	SteoOne Software v2.3, BD FACSDiva V8.0
Data analysis	GraphPad Prism v.6 and v.7, SPSS v.22, Photoshop CS6, R v3.3.2, Gephi v.0.8.2 beta, FlowJo v.8 Mac and v.10 PC.

For manuscripts utilizing custom algorithms or software that are central to the research but not yet described in published literature, software must be made available to editors/reviewers upon request. We strongly encourage code deposition in a community repository (e.g. GitHub). See the Nature Research guidelines for submitting code & software for further information.

#### Data

Policy information about availability of data

All manuscripts must include a data availability statement. This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A list of figures that have associated raw data
- A description of any restrictions on data availability

Data Availability

RNA sequencing data presented in this study have been deposited in NCBI GEO repository under the accession #GSE119273.

### Field-specific reporting

Please select the best fit for your research. If you are not sure, read the appropriate sections before making your selection.

K Life sciences Behavioural & social sciences Ecological, evolutionary & environmental sciences

For a reference copy of the document with all sections, see <u>nature.com/authors/policies/ReportingSummary-flat.pdf</u>

# Life sciences study design

All studies must dis	sclose on these points even when the disclosure is negative.
Sample size	No statistical tests were used to predetermine sample size. For in vivo experiments, sample sizes were determined based on the numbers required to achieve statistical significance using non-parametric statistics.
Data exclusions	Statistical tests for outliers are routinely performed, Grubbs' test for outliers was used for excluding outliers.
Replication	Consistent results obtained from at least two or three biological replicates with more than two technical replicates per experiment were used in the manuscript. A significant number of the experiments used 3-4 biological replicates and 3-4 technical replicates.
Randomization	Allocation of mice was random in all in vivo experiments, taken from littermates.
Blinding	The investigators were not blinded to allocation during the experiments and outcome assessment. All experiments required known injections of substances, including apoptotic cells, inhibitors, etc. Therefore, it was not possible to blind the investigator for such experiments.

# Reporting for specific materials, systems and methods

#### Materials & experimental systems **Methods** n/a Involved in the study n/a Involved in the study X Unique biological materials ChIP-seq $\mathbf{X}$ Antibodies Flow cytometry Eukaryotic cell lines MRI-based neuroimaging Palaeontology Animals and other organisms Human research participants

### Flow Cytometry

#### Plots

Confirm that:

The axis labels state the marker and fluorochrome used (e.g. CD4-FITC).

The axis scales are clearly visible. Include numbers along axes only for bottom left plot of group (a 'group' is an analysis of identical markers).

 $\bigotimes$  All plots are contour plots with outliers or pseudocolor plots.

 $\bigotimes$  A numerical value for number of cells or percentage (with statistics) is provided.

#### Methodology

Sample preparation

Reported under Methods, in "In vivo engulfment assay and quantitative RT-PCR", "In vivo engulfment assay and quantitative RT-PCR", "In vivo thymus efferocytosis assay" and "Macrophages isolation and analysis". Peritoneal exudates were obtained via cold PBS flush. Thymocytes were obtained by gentle mechanical disruption. Bone marrow cells for BMDMs was obtained by flushing tibia and fibia using serum-complete media. All samples were filtered prior to staining. Samples were kept on ice during staining and collection. All fluorescent antibodies were aliquotted in a sterile hood with minimal light exposure. Staining of samples were protected from light throughout.

Instrument	Data were collected on a FACS Canto I (Becton Dickinson).
Software	Data were collected analyzed with FlowJo v8 and v10 (Treestar, Inc).
Cell population abundance	Purity of isolated samples was obtained by antibody stain and FACS. Sample purity was greater than 95% in all experiments.
Gating strategy	Standard lymphocyte gates were applied, following by doublet exclusion using FSCHxW and SSC-HxW. In our studies, macrophages were gated using a combination of CD11b and F4/80. For in vitro experiments, all phagocytes were labeled with GFP or CFSE, whereas all apoptotic cells were labeled with a reporter dye such as CypHer5E or TAMRA. Singlets were similarly gated for in vitro experiments prior to analysis of GFP+/CFSE+, CypHer5E+/TAMRA+ cells.

Tick this box to confirm that a figure exemplifying the gating strategy is provided in the Supplementary Information.