

## Major Resources Table

In order to allow validation and replication of experiments, all essential research materials listed in the Methods should be included in the Major Resources Table below. Authors are encouraged to use public repositories for protocols, data, code, and other materials and provide persistent identifiers and/or links to repositories when available. Authors may add or delete rows as needed.

### Animals (in vivo studies)

Species	Vendor or Source	Background Strain	Sex	Persistent ID / URL
SAS Sprague Dawley Rat	Charles River Laboratories	Strain code 400	M	<a href="https://www.criver.com/products-services/find-model/sas-sprague-dawley-rat?region=3611">https://www.criver.com/products-services/find-model/sas-sprague-dawley-rat?region=3611</a>

### Genetically Modified Animals

	Species	Vendor or Source	Background Strain	Other Information	Persistent ID / URL
Parent - Male					
Parent - Female					

### Antibodies

Target antigen	Vendor or Source	Catalog #	Working concentration	Lot # (preferred but not required)	Persistent ID / URL
MPO	ThermoFisher	PA5-16672	1:100		<a href="https://www.thermofisher.com/antibody/product/Myeloperoxidase-Antibody-Polyclonal/PA5-16672">https://www.thermofisher.com/antibody/product/Myeloperoxidase-Antibody-Polyclonal/PA5-16672</a>
$\alpha$ -SA	Abcam	ab9465	1:100		<a href="https://www.abcam.com/sarcomeric-alpha-actinin-antibody-ea-53-ab9465.html">https://www.abcam.com/sarcomeric-alpha-actinin-antibody-ea-53-ab9465.html</a>
CD3	Abcam	ab16669	1:100		<a href="https://www.abcam.com/cd3-antibody-sp7-ab16669.html">https://www.abcam.com/cd3-antibody-sp7-ab16669.html</a>
CD11c	ThermoFisher	PA5-90208	1:100		<a href="https://www.thermofisher.com/antibody/product/CD11c-Antibody-Polyclonal/PA5-90208">https://www.thermofisher.com/antibody/product/CD11c-Antibody-Polyclonal/PA5-90208</a>
CD11b	Abcam	ab52478	1:200		<a href="https://www.abcam.com/cd11b-antibody-ep1345y-c-terminal-ab52478.html">https://www.abcam.com/cd11b-antibody-ep1345y-c-terminal-ab52478.html</a>
SOCS3	Abcam	ab16030	1:200		<a href="https://www.abcam.com/socs3-antibody-ab16030.html">https://www.abcam.com/socs3-antibody-ab16030.html</a>
CD206	Abcam	ab64693	1:200		<a href="https://www.abcam.com/mannose-receptor-antibody-ab64693.html">https://www.abcam.com/mannose-receptor-antibody-ab64693.html</a>
Ki67	ThermoFisher	11-5698-82	1:100		<a href="https://www.thermofisher.com/antibody/product/Ki-67-Antibody-clone-SolA15-Monoclonal/11-5698-82">https://www.thermofisher.com/antibody/product/Ki-67-Antibody-clone-SolA15-Monoclonal/11-5698-82</a>
MHC-II	Abcam	ab55152	1:200		<a href="https://www.abcam.com/mhc-class-ii-antibody-6c6-ab55152.html">https://www.abcam.com/mhc-class-ii-antibody-6c6-ab55152.html</a>
CD45	Abcam	ab10558	1:100		<a href="https://www.abcam.com/cd45-antibody-ab10558.html">https://www.abcam.com/cd45-antibody-ab10558.html</a>
CD4	Abcam	ab237722	1:100		<a href="https://www.abcam.com/cd4-antibody-cal4-ab237722.html">https://www.abcam.com/cd4-antibody-cal4-ab237722.html</a>
Foxp3	ThermoFisher	53-4776-42	1:100		<a href="https://www.thermofisher.com/antibody/product/FOXP3-Antibody-clone-PCH101-Monoclonal/53-4776-42">https://www.thermofisher.com/antibody/product/FOXP3-Antibody-clone-PCH101-Monoclonal/53-4776-42</a>

CD31	Abcam	ab28364	1:50		<a href="https://www.abcam.com/cd31-antibody-ab28364.html">https://www.abcam.com/cd31-antibody-ab28364.html</a>
$\alpha$ -SMA	Abcam	ab32575	1:200		<a href="https://www.abcam.com/products/primary-antibodies/alpha-smooth-muscle-actin-acetyl-e3--actg2-acetyl-e3-antibody-e184-ab32575.html">https://www.abcam.com/products/primary-antibodies/alpha-smooth-muscle-actin-acetyl-e3--actg2-acetyl-e3-antibody-e184-ab32575.html</a>
PP2A	Abcam	ab32065	1:1000(WB)		<a href="https://www.abcam.com/pp2a-alpha--beta-antibody-ye351-ab32065.html">https://www.abcam.com/pp2a-alpha--beta-antibody-ye351-ab32065.html</a>
Foxo3-p253	Abcam	ab47285	1:100(IF); 1:500(WB)		<a href="https://www.abcam.com/foxo3a-phospho-s253-antibody-ab47285.html">https://www.abcam.com/foxo3a-phospho-s253-antibody-ab47285.html</a>
Foxo3	Abcam	ab70315	1:100(IF); 1:500(WB)		<a href="https://www.abcam.com/foxo3a-antibody-ab70315.html">https://www.abcam.com/foxo3a-antibody-ab70315.html</a>
p-Akt	Cell signaling technology	4060S	1:1000(WB)		<a href="https://www.cellsignal.com/products/primary-antibodies/phospho-akt-ser473-d9e-xp-rabbit-mab/4060">https://www.cellsignal.com/products/primary-antibodies/phospho-akt-ser473-d9e-xp-rabbit-mab/4060</a>
IL-17a	Invitrogen	11-7177-81	1:100		<a href="https://www.thermofisher.com/antibody/product/IL-17A-Antibody-clone-eBio17B7-Monoclonal/11-7177-81">https://www.thermofisher.com/antibody/product/IL-17A-Antibody-clone-eBio17B7-Monoclonal/11-7177-81</a>
IFN-gamma	BD Biosciences	559498	1:100		<a href="https://wwwbdbiosciences.com/en-us/products/reagents/flow-cytometry-reagents/research-reagents/single-color-antibodies-ruo/fitc-mouse-anti-rat-ifn.559498">https://wwwbdbiosciences.com/en-us/products/reagents/flow-cytometry-reagents/research-reagents/single-color-antibodies-ruo/fitc-mouse-anti-rat-ifn.559498</a>
IL-10	BD Biosciences	562156	1:100		<a href="https://wwwbdbiosciences.com/en-us/search-results?searchKey=562156">https://wwwbdbiosciences.com/en-us/search-results?searchKey=562156</a>
actin	ThermoFisher	MA5-11869	1:1000(WB)		<a href="https://www.thermofisher.com/antibody/product/Actin-Antibody-clone-ACTN05-C4-Monoclonal/MA5-11869">https://www.thermofisher.com/antibody/product/Actin-Antibody-clone-ACTN05-C4-Monoclonal/MA5-11869</a>
IL-34 Antibody	R&D systems	AF5159	Neutralizing		<a href="https://www.rndsystems.com/products/mouse-il-34-antibody_af5195">https://www.rndsystems.com/products/mouse-il-34-antibody_af5195</a>
IL-33 Antibody	ThermoFisher	PA5-47007	Neutralizing		<a href="https://www.thermofisher.com/antibody/product/IL-33-Antibody-Polyclonal/PA5-47007">https://www.thermofisher.com/antibody/product/IL-33-Antibody-Polyclonal/PA5-47007</a>
IL-10 Antibody	ThermoFisher	16-7102-85	Neutralizing		<a href="https://www.thermofisher.com/antibody/product/IL-10-Antibody-clone-JES5-2A5-Monoclonal/16-7102-85">https://www.thermofisher.com/antibody/product/IL-10-Antibody-clone-JES5-2A5-Monoclonal/16-7102-85</a>
CD25	Absolute antibody	Ab00552-1.1	Neutrophilizing		<a href="https://absoluteantibody.com/product/anti-cd25-ox-39/">https://absoluteantibody.com/product/anti-cd25-ox-39/</a>

### DNA/cDNA Clones

Clone Name	Sequence	Source / Repository	Persistent ID / URL

### Cultured Cells

Name	Vendor or Source	Sex (F, M, or unknown)	Persistent ID / URL
Human umbilical cord derived MSCs	ATCC	unknown	<a href="https://www.atcc.org/products/pcs-500-010">https://www.atcc.org/products/pcs-500-010</a>

### Data & Code Availability

Description	Source / Repository	Persistent ID / URL
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DOI [to be added]


## Other

Description	Source / Repository	Persistent ID / URL
DiD	ThermoFisher, V22887	<a href="https://www.thermofisher.com/order/catalog/product/V22887?SID=srch-hj-V22887">https://www.thermofisher.com/order/catalog/product/V22887?SID=srch-hj-V22887</a>
TRIzol reagent	Invitrogen, 15596026	<a href="https://www.thermofisher.com/order/catalog/product/15596026?SID=srch-srp-15596026">https://www.thermofisher.com/order/catalog/product/15596026?SID=srch-srp-15596026</a>
iScript cDNA Synthesis Kit	Bio-Rad, 1708891	<a href="https://www.bio-rad.com/en-us/sku/1708891-iscrypt-cdna-synthesis-kit-100-x-20-ul-rxns?ID=1708891">https://www.bio-rad.com/en-us/sku/1708891-iscrypt-cdna-synthesis-kit-100-x-20-ul-rxns?ID=1708891</a>
SsoAdvanced Universal SYBR Green Supermix	Bio-Rad, 1725271	<a href="https://www.bio-rad.com/en-us/SearchResults?search_api_fulltext=1725271">https://www.bio-rad.com/en-us/SearchResults?search_api_fulltext=1725271</a>
Rat cytokine array panel A	R&D systems	<a href="https://www.rndsystems.com/search?keywords=Rat+cytokine+array+panel+A">https://www.rndsystems.com/search?keywords=Rat+cytokine+array+panel+A</a>
PMSF	Thermofisher, Catalog#36978	<a href="https://www.thermofisher.com/order/catalog/product/36978?SID=srch-srp-36978">https://www.thermofisher.com/order/catalog/product/36978?SID=srch-srp-36978</a>
enhanced chemiluminescence (ECL) kit	Bio-Rad, catalog#1705061	<a href="https://www.bio-rad.com/en-us/SearchResults?search_api_fulltext=1705061">https://www.bio-rad.com/en-us/SearchResults?search_api_fulltext=1705061</a>
Masson staining	Sigma, HT15-1KT	<a href="https://www.sigmaaldrich.com/US/en/product/sigma/ht15">https://www.sigmaaldrich.com/US/en/product/sigma/ht15</a>
DAPI-containing Fluoromount-G	Southern Biotech, 0100-20	<a href="https://www.southernbiotech.com/dapi-fluoromount-gr-0100-20">https://www.southernbiotech.com/dapi-fluoromount-gr-0100-20</a>
TUNEL assay kit	Promega, G3250	<a href="https://www.promega.com/products/cell-health-assays/apoptosis-assays/deadend-fluorometric-tunel-system/?catNum=G3250">https://www.promega.com/products/cell-health-assays/apoptosis-assays/deadend-fluorometric-tunel-system/?catNum=G3250</a>

## ARRIVE GUIDELINES

The ARRIVE guidelines (<https://arriveguidelines.org/>) are a checklist of recommendations to improve the reporting of research involving animals. Key elements of the study design should be included below to better enable readers to scrutinize the research adequately, evaluate its methodological rigor, and reproduce the methods or findings.

### Study Design

Groups	Sex	Age	Number (prior to experiment)	Number (after termination)	Littermates (Yes/No)	Other description
Group 1 (IPC-PBS)	M	8-10 weeks	6	6	No	
Group 2 (IPC-PBS+IgG)	M	8-10 weeks	6	6	No	
Group 3 (IPC-PBS+anti-CD25)	M	8-10 weeks	6	6	No	
Group 4 (IPC-Exo)	M	8-10 weeks	6	6	No	
Group 5 (IPC-Exo+IgG)	M	8-10 weeks	6	6	No	
Group 6 (IPC-Exo+anti-CD25)	M	8-10 weeks	6	6	No	

**Sample Size:** Please explain how the sample size was decided Please provide details of any a *prior* sample size calculation, if done.

No statistical methods were used to predetermine the sample size. For all these experiments, 6 independent repeats/animals were deployed in each group, which allowed sufficient statistical analysis to generate p values to indicate the significance.

### Inclusion Criteria

After myocardial infarction modeling, the animals with an obvious pale color change to the apex of the heart were included for study.

### Exclusion Criteria

No data was excluded. Given the same age, a female rat has a much smaller left ventricular diameter and wall thickness. To increase the consistency of quantitative data that are directly related to these parameters, such as infarct area and scar thickness, we only used male rats in this study. We have added that no female rats were included is a limitation of the present study.

### Randomization

All samples were randomly assigned, and analyzed together in each experiment

### Blinding

Data acquisition and analysis were performed by investigators who are blinded to the groups

DOI [to be added]