Supplementary items:

The Cardiogenics Consortium
François Cambien¹, Panos Deloukas², Jeanette Eardman³, Alison H Goodall⁴,⁵, Christian Hengstenberg⁶, Willem H Ouwehand²,⁷, Nilesh J Samani⁴,⁵, Heribert Schunkert⁸

¹INSERM UMRS 937, Pierre and Marie Curie University (UPMC, Paris 6) and Medical School, 91 Bd de l’Hôpital 75013, Paris, France
²The Wellcome Trust Sanger Institute, Wellcome Trust Genome Campus, Hinxton, Cambridge CB10 1SA, UK
³Medizinische Klinik 2, Universität zu Lübeck, Lübeck Germany;
⁴Department of Cardiovascular Sciences, University of Leicester, Glenfield Hospital, Groby Road, Leicester, LE3 9QP, UK
⁵Leicester NIHR Biomedical Research Centre, Glenfield Hospital, Leicester, LE3 9QP, UK
⁶Klinik und Poliklinik für Innere Medizin II, Universität Regensburg, Germany;
⁷Department of Haematology, University of Cambridge, Long Road, Cambridge, CB2 2PT, UK and National Health Service Blood and Transplant, Cambridge Centre, Long Road, Cambridge, CB2 2PT, UK
⁸German Center for Cardiovascular Research, Munich Heart Alliance, D-80636 Munich, Germany.
Supplementary figure 1. Classification of macrophage phenotypes with RT-qPCR. Human MDMs isolated and differentiated from blood were unstimulated (M) or stimulated with LPS and INF-γ (M1LPS+INF-γ) and IL-4 (M2aIL-4) for 24 hours. RNA levels of IL-1β, IL-6, CD80, CD86, TNF, SCARB1, and MRC1 24 hours after macrophage polarisation. Results of one-way ANOVA are presented; mean±SEM is plotted; *p<0.05 **p<0.01 ****p<0.0001 (n=6-10 donor/group).
Supplementary figure 2. *Trib1*<sup>mKO</sup> tumours did not alter T cell subtypes and TAM phenotype. (A, C, E) Post-mortem analysis of MR+ TAMs in *Trib1*<sup>mKO</sup> and respective *Trib1*<sup>mWT</sup> tumours by flow cytometry. LSRII flow cytometer was used to acquire data and analysed using Flowjo. (B, D, F) Quantification of CD4+ naïve and CD8+ cytotoxic T-cells and MR+ anti-inflammatory TAMs in *Trib1*<sup>mTg</sup> and respective *Trib1*<sup>mWT</sup> tumours. Results of unpaired t-test are presented; mean±SEM is plotted (n=3 mice/group).
Supplementary figure 3. Images of fluorescence staining on Trib1<sup>mKO</sup> tumours. (A) Representative images of CD31 (white) and F4/80 (green) fluorescence staining in Trib1<sup>mKO</sup> and respective Trib1<sup>mWT</sup> tumours (Scale: 50µm). (B) Representative images of NOS2 (red) and F4/80 (green) fluorescence staining in Trib1<sup>mKO</sup> and respective Trib1<sup>mWT</sup> tumours (Scale: 50µm). Images were captured using Nikon A1 confocal microscope.
Supplementary figure 4. *TRIB1* knockdown MDMs accelerate pro-inflammatory cytokines. (A-H) *In vitro* assessment of cytokine expressions in human MDMs 48 hours after *TRIB1* siRNA transfection. RNA levels of IL-1β, IL-8, TNF, CCL20, IL-6, IL-10, PD-L1, and VEGF 48 hours after *TRIB1* siRNA transfection (M*TRIB1-KD*). Results of paired t-test is presented; mean is plotted; *p<0.05 **p<0.01 (n=6-9 donor/group). (I-P) *In vitro* assessment of cytokine expressions in human MDMs 72 hours after *TRIB1* siRNA transfection and polarisation towards TAM with CM. RNA levels of IL-1β, IL-8, TNF, CCL20, IL-6, IL-10, PD-L1, and VEGF 48 hours after *TRIB1* siRNA transfection and TAM polarisation (TAM*TRIB1-KD*). Results of paired t-test is presented; mean is plotted; *p<0.05 **p<0.01 (n=4-9 donor/group).
Supplementary figure 5. Fluorescence staining images of TAMs in Trib1mTg tumours. (A) Representative images of CD31 (white) and F4/80 (green) fluorescence staining in Trib1mTg and respective Trib1mWT tumours (Scale: 50µm). Images were captured using Nikon A1 confocal microscope. (B) Representative images of CA9 (red) and F4/80 (green) fluorescence staining in Trib1mTg and respective Trib1mWT tumours (Scale: 100µm). Images were captured using Leica AF6000 microscope. (C) Representative images of CD31 (white), NOS2 (red) and F4/80 (green) fluorescence staining in Trib1mTg and respective Trib1mWT tumours (Scale: 50µm). (D) Representative images of CD31 (white), MR (red) and F4/80 (green) fluorescence staining in Trib1mTg and respective Trib1mWT tumours (Scale: 50µm). Images were captured using Nikon A1 confocal microscope.
Supplementary figure 6. Fluorescence staining images of T-cells and IL-15 expression in TAMs in Trib1mTg tumours. (A) Representative images of CD3 (white) fluorescence staining in Trib1mTg and respective Trib1mWT tumours (Scale: 50µm). (B) Representative images of CD4 (green), CD8 (red) and CD3 (white) fluorescence staining in Trib1mTg and respective Trib1mWT tumours (Scale: 50µm). (C) Representative images of IL-15 (red) and F4/80 (green) fluorescence staining in Trib1mTg and respective Trib1mWT tumours (Scale: 50µm). Images were captured using Nikon A1 confocal microscope.
### Supplementary table 1. SYBR RT-qPCR primer sequences.

| Gene   | Species | Forward primer 5’ – 3’ | Reverse primer 5’ – 3’ |
|--------|---------|-------------------------|------------------------|
| IL-1β  | Human   | GCTCGCCAGTGAAATGTG       | GAAGCCCTTGCTGTAGTG     |
| IL-6   | Human   | ACCCCAGGAGAAGATTCA       | GATGCGTGAGGATGTAC      |
| IL-8   | Human   | TGCCAAGGAGTGCTAAAG       | CTCCACACCCTCTGCAC      |
| IL-10  | Human   | GCCTTTAAATAAGCTCAAG      | ATCTTCATGGTCATGAG      |
| IL-15  | Human   | ACAGAAGCCAACCTGGGTG      | GCTGTTACTTGGCAACTGGG   |
| SCARB1 | Human   | GAATCCCCATGAACTGCTGT     | TCCCAGTTTGCAATGCC      |
| MRC1   | Human   | AGATGGGTGGGTTATTTACAAAGA| ATATTTCCATAGAAACTTC    |
| TNF    | Human   | CCTGCTGCACTTTGGAGTG      | CTTGTCACTCAGGTTCCAGA   |
| PD-L1  | Human   | AGGGCATTTCCCAGAAAGATGA   | GGTCCCTTGGAACCTGAC     |
| VEGF   | Human   | ATGCGGATCAAACCTCACC      | GCTCTATCTTTTGGTC      |
| CCL20  | Human   | ACTGGGTACTCAACACTGAC     | CAAAGCACGAGGAGCAAC     |
| TRIB1  | Human   | CTCCACGGAGGAGAACC        | GACAAAGCATCATCTCC      |
| GAPDH  | Human   | ATTGCCCTCAACGACCACTTT    | CCCTGTGCTGTAGCCAAA     |
| IL-15  | Mouse   | GACACCATTTATACACTGACATG  | TCACATTCTTGCAAGCAGA    |
| B-actin| Mouse   | GGGACCTGACAGACTACCTCATG  | GTCACGCACGATTTCCCTTC   |
### Supplementary table 2. TRIB1 affected top 10 macrophage pathway analysis.

| Pathway                                               | Monocyte log.fold.change | FDR       | Macrophage log.fold.change | FDR       |
|-------------------------------------------------------|--------------------------|-----------|-----------------------------|-----------|
| CREATION OF C4 AND C2 ACTIVATORS                     |                          |           | 0.344                       | 0.000073  |
| TRANSLOCATION OF ZAP 70 TO IMMUNOLOGICAL SYNPASE      | -0.03364                 | 0.536811  | 0.202                       | <0.000001 |
| PD1 SIGNALLING                                        | -0.01899                 | 0.670612  | 0.172                       | <0.000001 |
| PHOSPHORYLATION OF CD3 AND TCR ZETA CHAINS           | -0.02801                 | 0.544339  | 0.161                       | <0.000001 |
| HDL MEDIATED LIPID TRANSPORT                         | 0.008707                 | 0.434654  | 0.159                       | <0.000001 |
| CHEMOKINE RECEPTORS BIND CHEMOKINES                  | 0.228                    | <0.000001 | 0.15                        | <0.000001 |
| INITIAL TRIGGERING OF COMPLEMENT                     | 0.007888                 | 0.7942    | 0.149                       | 0.0017    |
| GENERATION OF SECOND MESSENGER MOLECULES             | -0.01264                 | 0.668659  | 0.127                       | <0.000001 |
| LIPOPROTEIN METABOLISM                                |                          |           | 0.112                       | <0.000001 |
| NOREPINEPHRINE NEUROTRANSMITTER RELEASE CYCLE        | 0.04296                  | 0.002402  | 0.095                       | 0.000095  |