Electronic supplemental Methods

**Tissue culture.** Samples of SAT or VAT were individually placed in culture flasks with RPMI medium (Lonza, Verviers, Belgium) supplemented with 10% FBS, 1% L-glutamine and 1% penicillin–streptavidin (Life Technologies, Carlsbad, CA, USA) at 37°C in a 5% CO₂ atmosphere. After 22 h, culture supernatants were concentrated 10-fold using a Vivaspin 4 with a 10,000 MWCO PES (Sartorius Stedim Biotech, Aubagne, France) according to manufacturer’s instructions and stored at -20°C.

**Quantitative RT-PCR.** Total RNA was extracted from frozen adipose tissue using the RNeasy Lipid Tissue Mini Kit (Qiagen, Hilden, Germany) according to the manufacturer’s instructions. Isolated RNAs were treated with DNase I (Roche, Basel, Switzerland) for 20 min at 37°C. Next, 500 ng of total RNA was used for reverse transcription with the Moloney murine leukemia virus (MMLV) reverse transcriptase (Invitrogen, Carlsbad, CA, USA). For quantitative real-time RT-PCR, each cDNA was analyzed, in triplicate, with the SYBR Green MasterMix (Eurogentec, Liège, Belgium) in the ABI 7000 Sequence Detection System (Life Technologies, Carlsbad, CA, USA) or with the FastStart Universal SYBR Green Master (Roche, Basel, Switzerland) in the LightCycler 480 Real-Time PCR System (Roche, Basel, Switzerland). Results were normalized to hypoxanthine-guanine phosphoribosyltransferase-1 (HPRT1) and relative mRNA expression levels were calculated using 2^ΔCt [33]. The primers used to analyze the different transcripts were designed with the software Primer Express (Life Technologies, Carlsbad, CA, USA) (ESM Table 1).

**SVC isolation and flow cytometry.** Adipose tissue samples were minced with sterile scissors and digested with 1.5 mg/ml type I collagenase (Sigma-Aldrich, Saint-Louis, MO, USA) in PBS for 90 min at 37°C. To stop the collagenase activity, 10% FBS was added. After centrifugation at 400×g for 10 minutes, the floating mature adipocytes were removed, and the SVC pellet was resuspended in erythrocyte lysis buffer (155 mM NH₄Cl, 5.7 mM K₂HPO₄ and 0.1 mM EDTA; pH 7.3) for 10 minutes. After successive washes and a filtration through a 70-µm nylon cell strainer (BD Biosciences, San Jose, CA, USA), SVC were suspended in PBS supplemented with 3% FBS before being stained for flow cytometry with saturating amounts of various fluorochrome-conjugated antibodies, including CD45-phycocerythrin (PE)-cyanin 5 (PC5), CD14-fluorescein isothiocyanate (FITC), CD3-Horizon v500, CD4-eFluor 450, CD8-peridinin chlorophyll protein (PerCP), CD25-PE, CD127 biotin and streptavidin-allophycocyanin (APC)-eFluor 780, at 4°C for 20 minutes in the dark. All antibodies were obtained from Ebioscience, with the exception of CD3-Horizon v500, CD8-PerCP and CD14-
FITC from BD Biosciences. Flow cytometry was performed on a FACSaria flow cytometer (BD Biosciences, San Jose, CA, USA). Data were acquired, analyzed and plotted using FacsDiva 6.1.2 (http://www.bdbiosciences.com/eu/instruments/software/facsdiva/) and FlowJo V.10 software (http://www.flowjo.com/download/). SVC subpopulations were determined based on sideward scatter and CD45 and CD14 expression. Regulatory T cells were defined as CD3+CD4+CD25+CD127low. The ATMs were sorted from the CD45+CD14+SVC with a purity of >90%, resuspended at a concentration of 50,000 cells in 500 µl of supplemented RPMI medium and cultured in 24-well plates at 37°C in a 5%CO2 atmosphere. After 48 hours, the culture media were collected, centrifuged and stored at -20°C. However, we could not isolate a sufficient amount of ATMs from the VAT of lean patients and from the SAT of any group to assess IL-1B production.