**Supplementary Figure 1** Gating strategy for identification of monocyte/macrophage efferocytosis. Monocytes/macrophages were incubated with CFSE-labeled apoptotic cells for 2 hours and were then stained with anti-CD14 or anti-CD11b antibodies respectively. The efferocytosis index was calculated as follows: (number of CFSE+CD14+ monocytes/number of total CD14+ monocytes) ×100 (%), or (number of CFSE+CD11b+ macrophages/number of total CD11b+ macrophages) ×100 (%). A blank control as well as a isotype control as controls for gating, with two replicate wells per sample to increase the stability and reliability of the experiment.
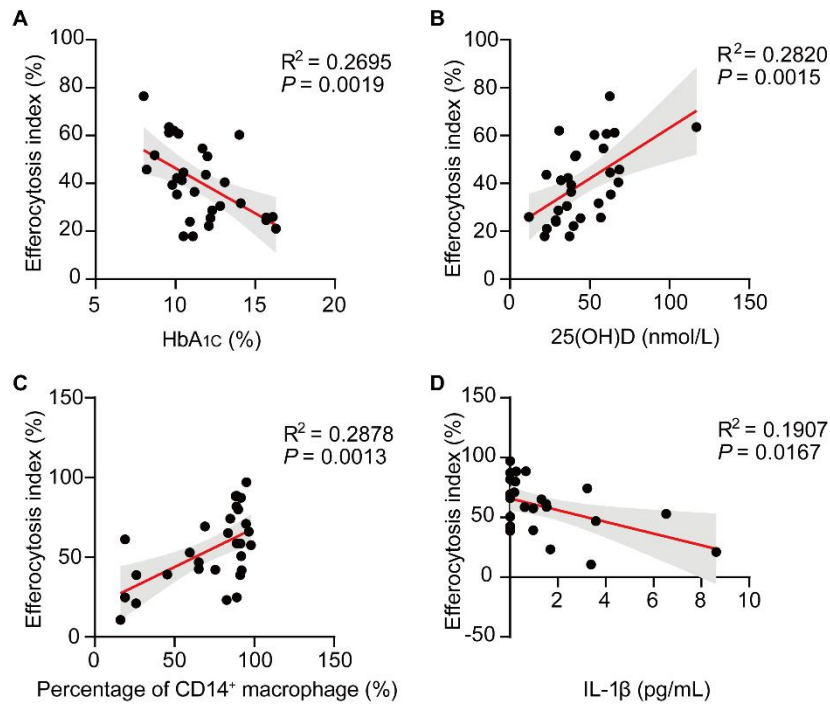
Supplementary Figure 2 Parameters correlated with the efferocytosis index of monocytes and monocyte-derived macrophages in patients with type 2 diabetes. Univariate regression analysis of the relationships between each variable and efferocytosis index of monocyte (A-B) and monocyte-derived macrophage (C-D) in diabetes patients. The regression line (black line) and corresponding 95%CI (gray area) are shown for each univariate regression analysis.

Supplementary Table 1-Monocyte classification in subjects with or without type 2 diabetes

		Control	T2D	*P* value
Monocyte count and frequency	Monocyte numbers	0.45 ± 0.23	0.41 ± 0.14	0.394
	Monocytes (%)	7.58 ± 2.99	6.59 ± 2.18	**0.027**
Monocyte subset frequencies	Classical monocyte (%)	71.79 (16.92)	70.29 (17.58)	**0.036**
	Intermediate monocyte (%)	3.98 (3.08)	3.17 (3.03)	0.513
	Nonclassical monocyte (%)	2.87 (1.51)	2.98 (3.33)	0.248

Data are mean ± SD, n (%), or median (IQR). *P* values indicate differences between T2D patients (n=30) and healthy control (n=30).

Supplementary Table 2 Multivariate linear regression analysis for variables associated with the monocyte efferocytosis index in the total sample population

Variables	Unstandardized Coefficients		Standardized Coefficients	t	*P* value	95.0% Confidence Internal for B	
	β	SE	stβ			Lower Bound	Upper Bound
(Constant)	60.587	11.301		5.361	< 0.001	37.878	83.297
HbA$_{1C}$	-3.792	0.505	-0.697	-7.505	< 0.001	-4.807	-2.777
Percentage of classical monocytes	0.367	0.144	0.236	2.542	0.014	.077	.657

Age, waist-to-hip ratio, HbA$_{1C}$, FPG, percentage of classical monocytes and serum 25(OH)D concentrations were introduced as independent variables in the stepwise linear regression analysis.

Supplementary Table 3 Multivariate linear regression analysis for variables associated with the macrophage efferocytosis index in the total sample population

Variables	Unstandardized Coefficients		Standardized Coefficients	t	P value	95.0% Confidence Internal for B	
	β	SE	stβ			Lower Bound	Upper Bound
(Constant)	17.460	9.051		1.929	.061	-.806	35.726
Percentage of CD14$^+$ macrophages	0.575	0.106	0.641	5.419	< 0.001	.361	.789

Age, HbA$_{1C}$, FPG, percentage of CD14$^+$ macrophages and serum IL-β concentrations, were introduced as independent variables in the stepwise linear regression analysis.

Supplementary Table 4 Multivariate linear regression analysis for variables associated with monocyte efferocytosis index in patients with type 2 diabetes

Variables	Unstandardized Coefficients		Standardized Coefficients	t	P value	95.0% Confidence Internal for B	
	β	SE	stβ			Lower Bound	Upper Bound
(Constant)	57.581	15.476		3.268	<0.001	25.827	89.334
25(OH)D	0.314	0.118	0.482	3.013	0.013	.071	.556
HbA$_{1C}$	-2.729	1.073	0.344	-2.149	0.017	-4.932	-.526

Age, HbA$_{1C}$ and 25(OH)D levels were introduced as independent variables in stepwise linear regression analysis.

Supplementary Table 5 Multivariate linear regression analysis for variables associated with monocyte efferocytosis index in patients with type 2 diabetes

Variables	Unstandardized Coefficients		Standardized Coefficients	t	*P* value	95.0% Confidence Internal for B	
	β	SE	stβ			Lower Bound	Upper Bound
(Constant)	19.662	12.149		1.189	0.249	-2.624	41.947
Percentage of CD14$^+$ macrophages	0.534	0.138	0.627	3.862	0.001	.248	.819

Age, percentage of CD14$^+$ macrophage, IL-1β levels were introduced as independent variables in stepwise linear regression analysis.

Supplementary Table 6 Participant characteristics of the healthy controls (CON) and diabetes patients with HbA1c lower than 11.0% (D1) or higher than 11.0% (D2)

Parameter	CON	D1	D2
N (females)	30 (8)	14 (5)	16 (4)
Age (years)	50 ± 10	50 ± 10	51 ± 11
BMI (kg/m2)	22.83 ± 2.37	$26.66 \pm 4.47^{**}$	24.23 ± 3.36
Waist to hip ratio	0.90 ± 0.09	$0.98 \pm 0.04^{**}$	$0.98 \pm 0.08^{\dagger}$
FPG (mmol/L)	5.07 ± 0.42	$9.00 \pm 1.81^{**}$	$11.08 \pm 3.81^{*,\dagger}$
HbA_{1C} (%)	5.1 ± 0.4	$9.8 \pm 0.9^{***}$	$13.3 \pm 1.8^{***,\dagger\dagger\dagger}$
hsCRP (mg/dl)	0.50 (1.50)	2.00 (5.75) **	2.00 (4.00) *
TNF-α (pg/ml)	1.00 (1.08)	1.09 (0.70)	0.64 (0.54)
IL-1β (pg/ml)	0.17 (0.95)	0.82 (1.37)	0.00 (1.31)
IL-6 (pg/ml)	2.25 (3.27)	2.38 (2.73)	3.18 (1.18)
IL-8 (pg/ml)	5.37 (5.05)	5.55 (7.85)	11.09 (9.33) *
IL-10 (pg/ml)	1.14 (1.38)	0.94 (1.03)	1.31 (1.42)
IL-12 (pg/ml)	0.22 (0.97)	0.10 (0.53)	0.32 (0.92)
25(OH)D (nmol/L)	50.59 ± 20.70	52.10 ± 23.85	40.28 ± 14.71

Data are mean $\pm$ SD, n (%), or median (IQR). * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$ vs CON. $\dagger$ $P < 0.05$, $\dagger\dagger$ $P < 0.01$ vs D1 from one-way ANOVA or Kruskal-Wallis rank test for normally and nonnormally distributed continuous variables, respectively. CON-control subjects, D1-diabetes patients with $HbA_{1C} < 11\%$, D2-diabetes patients with $HbA_{1C} \geq 11\%$.