

Table 2 Adipokine function and effects in type 2 diabetes mellitus (T2DM)

Adipokine	Physiological role	Effect in T2DM	References
Adiponectin	Insulin resistance Inflammation	Inhibition of hepatic glucose production Increased fatty acid oxidation Stimulation of glucose uptake in skeletal muscle Stimulation of insulin secretion Higher insulin sensitivity	(18), (41), (140), (141)
Leptin	Regulation of food intake Increased energy expenditure	Higher insulin sensitivity (Leptin resistance associated with obesity)	(18), (142)
Resistin	Insulin resistance Inflammation	Reduced insulin sensitivity Alteration in glucose metabolism Inhibition of insulin signalling	(18), (19), (143)
Visfatin	Insulin resistance	(Not fully explained in humans)	(18), (40)
Omentin	Insulin resistance	Enhancement of insulin-stimulated glucose transport	(144), (141)
Vaspin	Insulin resistance	(Not fully explained in humans)	(18), (141)
Retinol-binding protein-4	Insulin resistance Lipid metabolism	Inhibition of insulin signalling in adipocytes by inducing inflammation through activation of pro-inflammatory cytokines	(18), (145)