Table SI. Clinical data of the patients and control individuals included in the present study.

A, Patients with GO

Age, years	Sex	CAS	Duration of GO, years	R/L proptosis, mm	GD medication history	GO treatment history	Surgery performed
57	F	0	1	18/16	Methimazole	None	Orbital decompression
22	F	1	5	21/22	Methimazole	None	Orbital decompression
45	M	1	1	23/23	Levothyroxine sodium	IV methylprednisolone	Orbital decompression
48	F	0	13	20/20	Methimazole	None	Orbital decompression
27	F	2	2	20/23	Methimazole	IV methylprednisolone, radiotherapy	Orbital decompression
23	M	0	3	21/20	Methimazole	None	Orbital decompression
63	M	1	7	20/24	None	IV methylprednisolone, radiotherapy	Orbital decompression
65	F	0	2	23/23	None	IV methylprednisolone, radiotherapy	Orbital decompression
25	F	0	3	20.5/21	Levothyroxine sodium	IV methylprednisolone, radiotherapy	Orbital decompression
36	M	0	3	25/26	Levothyroxine sodium	None	Orbital decompression

B, Normal control subjects

Age, years	Sex	CAS	Duration of GO,years	R/L proptosis, mm	GD medication history	GO treatment history	Surgery performed
75	F	N/A	N/A	N/A	N/A	N/A	Upper lid blepharoplasty
74	M	N/A	N/A	N/A	N/A	N/A	Lower lid blepharoplasty
68	M	N/A	N/A	N/A	N/A	N/A	Upper lid blepharoplasty
76	F	N/A	N/A	N/A	N/A	N/A	Upper lid blepharoplasty
56	M	N/A	N/A	N/A	N/A	N/A	Orbital fat prolapse removal
37	F	N/A	N/A	N/A	N/A	N/A	Upper lid blepharoplasty
61	M	N/A	N/A	N/A	N/A	N/A	Upper lid blepharoplasty
61	F	N/A	N/A	N/A	N/A	N/A	Lower lid blepharoplasty

CAS, clinical activity scores; F, female; GD, Graves' disease; GO, Graves' orbitopathy; IV, intravenous; L, left; M, male; N/A, not applicable; R, right.

Table SII. Demographics of subjects used for peripheral blood analysis.

Characteristic	Normal controls(n=11)	Patients with GO(n=32)	P-value
Age, years (range)[a]	44.5±16.9 (21-83)	40.2±13.0 (20-78)	0.68
Sex, M/F[b]	3/8	13/19	0.67
Graves' disease duration, years	-	5.5±4.3	-
GO CAS (range)	-	1.5±1.7 (0-5)	-
Thyroid results (normal range)			
T3, ng/ml (0.61-1.16)	-	1.1±0.5	-
Free T4, ng/ml (0.80-1.23)	-	1.0±0.4	-
TSH,μIU/ml (0.41-4.30)	-	1.9±2.7	-
TRAb, IU/l (0-1.75)	-	11.4±12.1	-
TSI, SRR% (0-140%)	-	251.7±131.7	-

Data are presented as the mean ± SD or number.[a]UnpairedStudent's t-test was used.[b]Fisher's exact test was used.CAS, clinical activity scores; F, female; GO, Graves' orbitopathy; M, male; SRR, specimen-to-reference ratio;T3, triiodothyronine; T4, thyroxine; TRAb, thyroid-stimulating hormone receptor antibody; TSH, thyroid-stimulating hormone; TSI, thyroid-stimulating immunoglobulin.

Table SIII. Primers used for quantitative PCR.

Gene	Primer sequence, 5'-3'
HDAC1	F: CTA CTA CGA CGG GGA TGT TGG
	R: GAG TCA TGC GGA TTC GGT GAG
HDAC2	F: ATG GCG TAC AGT CAA GGA GG
	R: TGC GGA TTC TAT GAG GCT TCA
HDAC3	F: CCT GGC ATT GAC CCA TAG CC
	R: CTC TTG GTG AAG CCT TGC ATA
HDAC4	F: GGC CCA CCG GAA TCT GAA
	R: GAA CTC TGG TCA AGG GAA CTG
HDAC5	F: TCT TGT CGA AGT CAA AGG AGC
	R: GAG GGG AAC TCT GGT CCA AAG
HDAC6	F: AGC GGA GGT AAA GAA GAA AGG CAA AAT G
	R: CCA GGC AGG CAC AGG AGT ATG AGT T
HDAC7	F: GGC GGC CCT AGA AAG AAC AG
	R: CTT GGG CTT ATA GCG CAG CTT
HDAC10	F: TGG CAC CGC TAT GAG CAT
	R: GAG ACC AGC ACC AGC TCA G
GAPDH	F: ATG GGG AAG GTG AAG GTC G
	R: GGG GTC ATT GAT GGC AAC AAT A

F, forward; HDAC, histone deacetylase; R, reverse.

Table SIV. Antibodies used for western blotting.

Company	Antibody name (dilution)	Cat. no.
Cell Signaling Technology, Inc.	IL-6 (1:1,000)	12153
	IL-8 (1:500)	94407
	HDAC6 (1:1,000)	7558
	HDAC7 (1:1,000)	33418
	c/EBPα(1:1,000)	2295
	p-Akt(1:1,000)	9271
	t-Akt(1:1,000)	9272
	p-ERK(1:1,000)	9101
	t-ERK(1:1,000)	9102
	p-p38(1:1,000)	9211
	t-p38(1:1,000)	9212
	p-JNK(1:1,000)	9251
	t-JNK(1:1,000)	9252
	p-NF-κB(1:1,000)	3033
	t-NF-κB(1:1,000)	4764
	p-SMAD1/5/9(1:1,000)	13820
	t-SMAD1(1:1,000)	9743
	p-SMAD2 (1:1,000)	3108
	t-SMAD2(1:1,000)	5339
	p-SMAD3(1:1,000)	9520
	t-SMAD3(1:1,000)	9523
BD Biosciences	Fibronectin(1:1,000)	610077
Abcam	Collagen Iα(1:1,000)	ab138492
MilliporeSigma	α-SMA(1:1,000)	A5228
Santa Cruz Biotechnology, Inc.	Collagen 3(1:1,000)	sc-271249
	HDAC3(1:1,000)	sc-17795
	c/EBPβ(1:1,000)	sc-7962
	Adiponectin(1:1,000)	sc-136131
	Leptin(1:1,000)	sc-48408
	aP2(1:1,000)	sc-271529
	PPARγ(1:1,000)	sc-7273
	β-actin(1:1,000)	sc-69879

α-SMA, α-smooth muscle actin; aP2, adipocyte protein 2; c/EBP, CCAAT-enhancer-binding protein; HDAC, histone deacetylase; p-, phosphorylated; PPARγ, peroxisome proliferator-activated receptor γ;t-, total.

Table SV. Small interfering RNA sequences.

Name	Sequence, 5'-3'
Negative control	Sense: UUC UCC GAA CGU GUC ACG UTT
	Antisense: ACG UGA CAC GUU CGG AGA ATT
HDAC6[a]	GGGAGGUUCUUGUGAGAUC
	GGAGGGUCCUUAUCGUAGA
	GCAGUUAAAUGAAUUCCAU
	GUUCACAGCCUAGAAUAUA
HDAC7[a]	GACAAGAGCAAGCGAAGUG
	GCAGAUACCCUCGGCUGAA
	GGUGAGGGCUUCAAUGUCA
	UGGCUGCUCUUCUGGGUAA

[a]SMARTpool format, which is a mixture of four siRNAs used as a single reagent, was used.HDAC, histone deacetylase.