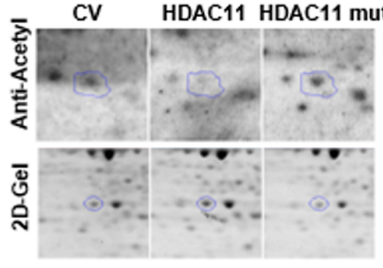
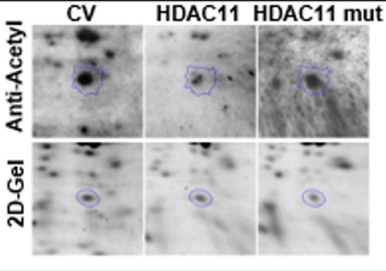
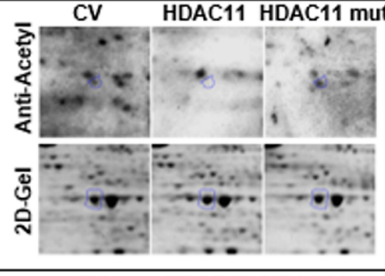
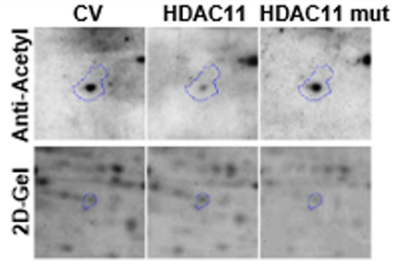
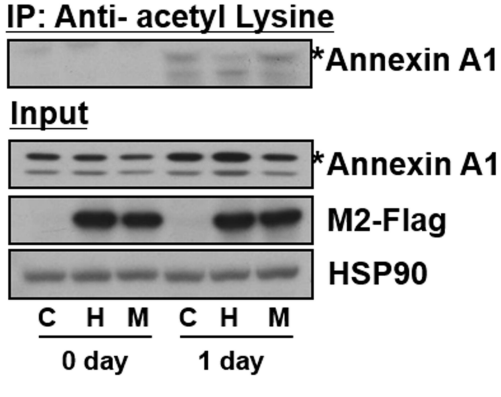
Figure S1

Identification of non-histone target proteins of HDAC11 during myoblast differentiation. C2C12 cells stably expressing CV, wild-type HDAC11 or catalytically inactive HDAC11 were differentiated, and the samples were collected at day 0, 1, 3 and 5. Protein samples from cells expressing CV, HDAC11 or HDAC11 mutant at each day were separated by 2-dimensional gel electrophoresis and western blot analysis was performed using an anti-acetyl-lysine antibody. (A) Table showing results of identification of four candidate proteins. (B) Western blot analysis reconfirming protein identification by measurement of the lysine acetylation level of annexin A1. (Changes in the lysine acetylation level of annexin A1 are represented by an asterisk (*)).

A

	Nonhiston Target	Acetylation pattern	Mascot score	Coverage	Sequences (Underline)
1	AnnexinA1 (1, 5day)		1171	71%	MAMVSEFLKQARFLENQEQEYVQAVKSYKGGPGS AVSPYP SFNVSSDVAALHKAIMVKGVDEATIIDILTK RTNAQRQQI K AAYLQENGKPLDEVLRKALTGHLE EVVLA MLKTPAQFDA DELRGAMKGLGTDEDTLIEI LTTRSNEQIREINRVYREELKRDLAKDITSDTSGDFR KAL LALAKGDRCQ DLSVNQDLADTDARALYEAG ERRKGTDVNV FTTILTSRSYPHLRRVFQNY GKYSQ HDMNKALDLELKGDIEKCLTTIVKCATSTPAFFAEK LYEAMKGAG TRHKALIRIMVSRSEIDMNE IKVFYQK KYG ISLCQAILDE TKGDYEKILV ALCGGN
2	Voltage-dependent anion-selective Channel protein 1 (3day only)		739	45%	MAVPPTYADLGKSARDVFTK GYGFGLIKLDLK TKSE NGLE FTSSGSANTETTKVNGSLETKYRWTE YGLT FTEKWNTDNT LGTEITVEDQ LARGLKLTFDSSFSP NTGKKAKIKTGYKREHINLGCDVD FDIAGPSIRGAL VLGYEGWLAGYQMNFETSKSRVTQSNFAVGYKTDE FQL HTNVNDGTEFGGSIYQKVNK KLETAVNLAWT A GNSNTRFG IAAKYQVDPDACFSAKVNNSSLIGLGYT QTLKPGIKLTLSALLDGKNVNAGGHKLGLGLE FQA
3	Enolase 1B (3day only)		2712	70%	MSILRIHAREIFDSRGNPTVEVDLYTAKGLFRAAVPS GASTGIYEALELRDNDKTRFMGKGVSQAVEHINKTI APALVSKKVNVVEQEKIDKLMIEMDGTENKSKFGA NAILGVSLAVCKAGAVEKGVPLYRHIADLAGNPEVIL PVPAFNVINGGSHAGNKLAMQEFMILPVGASSFRE AMRIGAEVYHNLKNVIKEKYGKDATNVGDEGGFAP NILENKEALELLKTAIAKAGYTDQVVIGMDVAASE FYRSGKYDLDFKSPDDPSRYITPDQLADLYKSFVQN YPVVSIEDPFDQDDWGAWQKFTASAGIQVVGDDL TVTNPKRIAKAASEKSCNCLLLKVNQIGSVTESLQAC KLAQSNGWGVMVSHRSGETEDTFIADLVVGLCTGQI KTGAPCRSERLAKYNQILRIEEELGSKAKFAGRSFRN PLAK
4	Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta-1 (0, 1, 3 day)		325	24%	MSELDQLRQE AEQLKNQIRD ARKACADATLSQIT NNIDPV GRIQMRTRRTLRGHLAKIYAMHWGTDSRLL VSASQDGKLIIWDSYTTNKVHAIPLRSSWVM TCAY APSGN YVACGGLDNI CSIYNLKTRE GNVRVSRELA GHTGYLSCCRFLDDNQIVTS SGDTTCALWDIETGQ QTTTF TGHTGDVMSL SLAPDTRLFVSGACDASAKL WDVREGMCRQ TFTGHESDIN AICFFPNGNA FATG SDDATCRLFDLRADQE LMTYSHDNII CGITSVSFSK SGRLLLAGYD DFNCNVWDALKADRAGVLAG HDN RVSCLGVTDDGMAVATG SWDSFLKIWN

B



C: control vector
H: HDAC11
M: HDAC11 (H142/143A)