

Supplementary Table S1. Antibodies and conditions used for IHC.

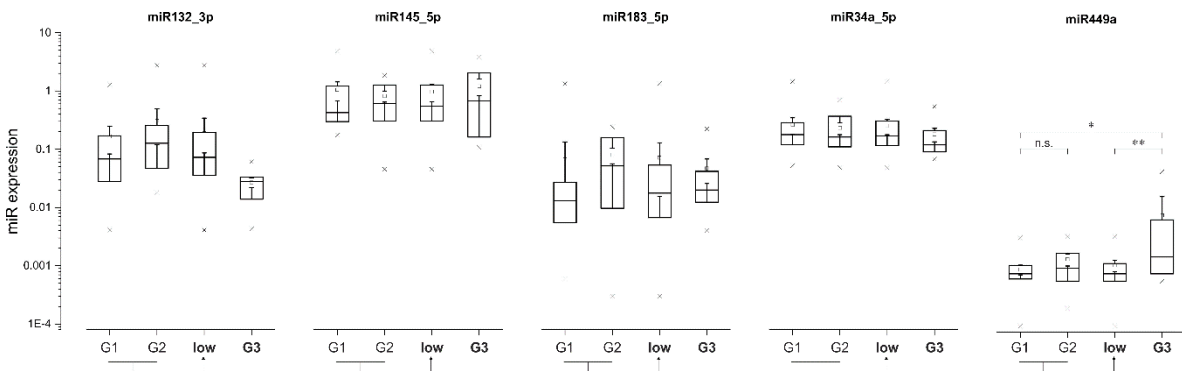
| Antibody* | Cat.-No. | Clone / Lot No. | Dilution / incubation |
|-----------|-----------------------|-----------------|-----------------------|
| HDAC1 | ab19845 ^a | GR100389-1 | 1:2000 / ½ h |
| HDAC2 | ab16032 ^a | GR114290-1 | 1:250 / ½ h |
| HDAC3 | sc-11417 ^b | H-99 | 1:100 / ½ h |
| HDAC4 | sc-11418 ^b | H-92 | 1:100 / ½ h |
| HDAC5 | ab55403 ^a | GR36969-3 | 1:500 / ½ h |
| HDAC6 | sc-11420 ^b | H-300 | 1:500 / ½ h |
| HDAC8 | ab39664 ^a | GR38788-6 | 1:100 / ½ h |
| HDAC9 | ab59718 ^a | GR129331-1 | 1:500 / ½ h |
| HDAC10 | ab53096 ^a | GR45168-3 | 1:200 / ½ h |
| HDAC11 | ab18973 ^a | GR107170-1 | 1:50 / ½ h |
| Sirt1 | sc-15404 ^b | H-300 | 1:100 / ½ h |

* Species: rabbit; Pretreatment: heat-induced epitope retrieval in pH = 9 antigen retrieval buffer (Dako, Glostrup, Denmark) and waterbath; Purchased from ^a abcam (Cambridge, UK) ^b Santa Cruz Biotechnology (Dallas, Texas)

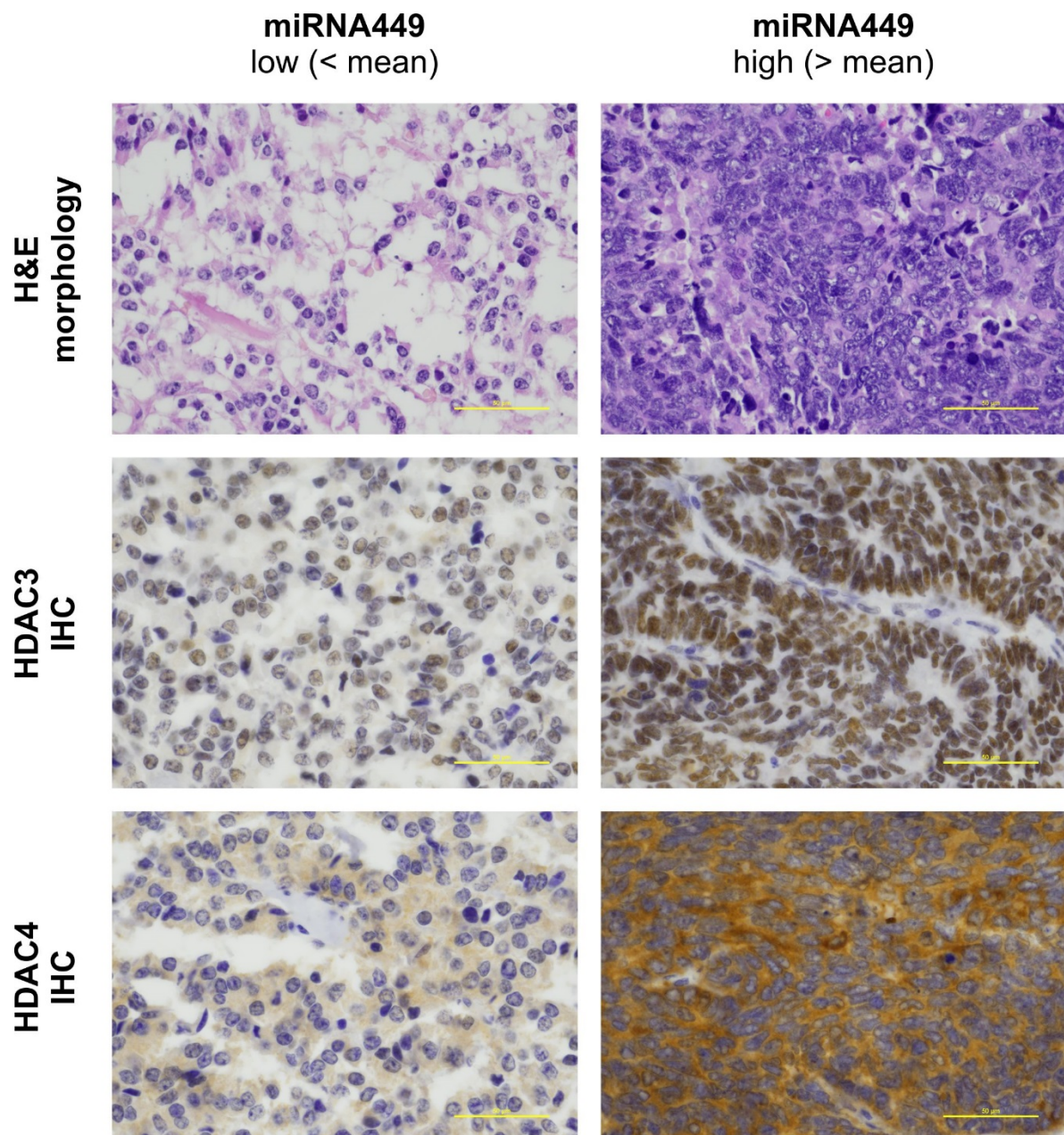
Supplementary Table S2. Correlation Analysis of miRNA and HDAC expression.

| | | HDAC1_PNET_ncl_Score | HDAC2_PNET_ncl_Score | HDAC3_PNET_ncl_Score | HDAC4_PNET_ncl_Score | HDAC5_PNET_ncl_Score | HDAC6_PNET_ncl_Score | HDAC8_PNET_ncl_Score | HDAC9_PNET_ncl_Score | HDAC10_PNET_ncl_Score | HDAC11_PNET_ncl_Score | SIRT1_PNET_ncl_Score | | | | |
|-----------|-----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|----------------------|--------|--------|--------|--------|
| miR132_3p | Pearson's correlation coefficient | -0.194 | -0.219 | -0.078 | -0.150 | -0.196 | 0.006 | -0.071 | -0.152 | -0.096 | -0.054 | -0.013 | -0.081 | -0.054 | 0.024 | -0.115 |
| | Sig. (two-sided) | 0.181 | 0.127 | 0.600 | 0.314 | 0.186 | 0.968 | 0.633 | 0.292 | 0.523 | 0.703 | 0.929 | 0.591 | 0.722 | 0.871 | 0.435 |
| miR145_5p | Pearson's correlation coefficient | 0.256 | 0.126 | 0.033 | -0.046 | 0.047 | -0.003 | 0.056 | -0.062 | 0.033 | 0.004 | 0.019 | 0.088 | 0.062 | -0.041 | -0.091 |
| | Sig. (two-sided) | 0.076 | 0.384 | 0.826 | 0.760 | 0.752 | 0.981 | 0.704 | 0.670 | 0.826 | 0.979 | 0.893 | 0.559 | 0.681 | 0.783 | 0.536 |
| miR183_5p | Pearson's correlation coefficient | -0.113 | -0.092 | -0.153 | -0.196 | -0.208 | -0.102 | -0.072 | -0.195 | -0.008 | -0.036 | -0.091 | 0.108 | 0.143 | -0.129 | -0.206 |
| | Sig. (two-sided) | 0.438 | 0.526 | 0.298 | 0.187 | 0.160 | 0.491 | 0.627 | 0.174 | 0.958 | 0.802 | 0.522 | 0.186 | 0.341 | 0.383 | 0.160 |
| miR34a_5p | Pearson's correlation coefficient | -0.125 | -0.086 | 0.194 | 0.012 | 0.152 | -0.002 | 0.010 | 0.006 | 0.152 | -0.003 | 0.088 | 0.083 | 0.060 | -0.038 | -0.003 |
| | Sig. (two-sided) | 0.393 | 0.554 | 0.186 | 0.936 | 0.308 | 0.987 | 0.947 | 0.966 | 0.309 | 0.985 | 0.535 | 0.582 | 0.692 | 0.796 | 0.982 |
| miR449a | Pearson's correlation coefficient | 0.237 | 0.192 | 0.310 | 0.302 | 0.245 | -0.179 | 0.154 | 0.042 | 0.045 | 0.001 | -0.008 | -0.042 | -0.099 | 0.107 | 0.176 |
| | Sig. (two-sided) | 0.101 | 0.182 | 0.032 | 0.039 | 0.097 | 0.224 | 0.294 | 0.771 | 0.765 | 0.995 | 0.955 | 0.782 | 0.513 | 0.469 | 0.231 |

Pearson correlation analysis of miRNA expression data and HDAC expression data. Shown are the correlation coefficients and the *p*-values. * *p* < 0.05, ** *p* < 0.01.



Supplementary Figure S1. Quantitative analysis of pNET-miRNA expression versus grading. The semi-quantitative miRNA expression scores are plotted via box plots versus grading of pNET cases. Additionally, the expression levels were summarized for G1 and G2 pNET cases. * *p* < 0.05, ** *p* < 0.01 (t-Test and ANOVA). According to statistical analysis there are only significant group differences related grading and miRNA449a.



Supplementary Figure S2. Histomorphology and HDAC3/4 Immunohistochemical staining. Representative images of H&E morphology (top row) and HDAC3 (second row) and HDAC4 (third row) immunohistochemistry staining for pNET cases with significant differences in HDAC expression related to miRNA449a expression levels (low/high). Scale bar (yellow) indicates 50 μ m at 400x magnification. Abbreviations: HDAC, histone deacetylase; H&E, hematoxylin & eosin; IHC, immunohistochemistry; pNET, pancreatic neuroendocrine tumor.