Description of Additional Supplementary Files

File Name: Supplementary Data 1 Description: Table of flow cytometry data containing PanKla and TFAP2B levels for cells from HH9 embryonic heads.

File Name: Supplementary Data 2 Description: Table of flow cytometry data containing PanKla levels for TFAP2B-positive cells from HH9 and HH12+ embryonic heads as well as for Pax7-positive cells from HH6 whole embryos.

File Name: Supplementary Data 3 Description: Table of consensus PanKla CUT&RUN peakset from HH9 NCCs with closest gene assignment information.

File Name: Supplementary Data 4 Description: Table of GO terms enriched among genes associated with the most highly lactylated peaks from the PanKla CUT&RUN dataset.

File Name: Supplementary Data 5 Description: Table listing the NCC enhancer elements compiled from the literature.

File Name: Supplementary Data 6 Description: Table of consensus H3K18La CUT&RUN peakset from HH9 NCCs with closest gene assignment information.

File Name: Supplementary Data 7 Description: Ranked list of motifs enriched the neural crest scATAC-seq peakset.

File Name: Supplementary Data 8 Description: Table of differential accessibility results for DMSO vs (R)-GNE-140 ATAC-seq samples.

File Name: Supplementary Data 9 Description: Table of differential analysis results for NCC vs PSM PanKla CUT&RUN samples.

File Name: Supplementary Data 10 Description: Table of GO terms enriched among genes associated with NCC- or PSM-enriched PanKla peaks.

File Name: Supplementary Data 11 Description: Table of results obtained from running chromVAR on the NCC vs PSM PanKla differential analysis dataset. File Name: Supplementary Data 12 Description: Table of results obtained from Nanostring experiment on LDHA/B MO and GTBlue-Control MO transfected neural folds from HH9 embryos.

File Name: Supplementary Data 13 Description: Table of results obtained from running HOMER on the consensus PanKla CUT&RUN peakset.

File Name: Supplementary Data 14

Description: Table of differential accessibility results for GTBlue-Control vs SOX9 MO ATAC-seq samples.