$\begin{array}{ccc} \mathsf{Pax2} & \mathsf{SoxB1} \\ \mathsf{TNGTCA}_\mathsf{T}^\mathsf{C}\mathsf{GC}_\mathsf{G}^\mathsf{A}\mathsf{TGA} & \mathsf{ATTGTG} \end{array}$ 

Consensus G-GCATAACTAGCTAAAGAATTTCACAATGTGGATAACCTCCAGCCCTCTGACTGTATGCAAAGCA--GGGGGCCTGAATGAGAGCATTGTGTTATAAAACCTTAA-CTGGAGCAAGACT

CACAAT SoxB1

Human GGGCATAAC TAGCCAAAGAATTTCACAATGTGGATAACCTCCAGCCCTCTGACTGTATGCAAAGTA--GGAGGCCTGAATGAGAGCATTGTGTTATAAAACCTTAAACTGGAGCAAGACT

Mouse CAGCATAGCTGGCTAAAGAATTTCACAATGTGGATAACCTCCAGCCCTCTGACTGTATGCAAAGCA--GGGGGCCTGAATGAGAGCATTGTGTTCTAAAACCTTAGGCTGGAGCAAGACT

Chick GCG---AACCATGTTAAAGCTTTCACAGTGTGAACAACCTCCGGCCCTCCGACTGTATGCAAAGCGAGGGGGGCCTGAATAAGAGCATTGTGTCTACAGGAGCTTAACGTGGAGCAAGACT

Gata SoxB1

AGATA

ATTGT

Consensus -AA-AAGCCCAATCTCTCTGGTTATTTTGGA-----CATTCAAATGCTGTCTAAGAGAAAAGAACTCATTATGACTCAGTTCCGTTAATTAGACGTAAATTACCATCTTTTGT--CO

C<sub>TATC</sub> T Gata

Human TAAAAAGCCCAATCTCTCTGGTTATTTTGGA-----CATTCAAATGCTGTCTAAGAGAAAAGAACTCATTATGACTCAGTTCCGTTAATTAGACGTAAATTACCATCTTTTGT---CT

Mouse CAA-AAGCCCAATCTCTCTGGTTATTTTGGA-----CATTCAAATGCTGTCTAAGAGAAAAGAACTCATTATGACTCAGTTCCGTTAATTAGAAGTAAATTACCATCTTTTGT---CC

Chick -AG-AAGCCCAGTTTTGCTGGTTATTTTGGAAATTAGCATTCAAACCATGTCTGAAAGAAGAAGCTCATTATGACTCAGTTCCGTTAATTAGACGTAAATTACTGTCTTTAGTGCCCC

Gata A TGATA

TCA TGCAT GACNA CACAAT
Pax2 SoxB1

Human
GATACAAAGGAGGTAAAGGGAACTCTGCAAGACCAGAGGATACTGAAATTCTAATGAGATGAGAGCATAGGCTGA-AACTG-AGTGAAAACAAGAAGCCATTCAACTAGAGGCAAGCCC
Mouse
AATACAAAAGAAGGTGCAGGGAACTCTGTGAGACCAGAGGAACCAGAGGAACTCTAATGAGATGAGACCATAGGCTGGGAACGG-GGTGAACACAAGAAGCCATTCAAGGAGGGAGGCCTCC
Chick
AGCACAAAGGAAGGTAACAGGAGTTCTGCAGGACCAGAGGATCAGAGAAATTCTAATGAGCTGAGAGCATGGGTGAGAGAGGTGAGAGGCCCCTCTGTGCACA

## Supplementary Figure 1. ClustalW alignment of human, mouse and chicken *N-Cadherin* En2-DP enhancer sequences.

Shaded bases are conserved across all three species, as reflected in the consensus enhancer sequence. The consensus is annotated with putative conserved transcription factor binding sites: those above the consensus are encoded on the sense strand, whereas those below are encoded on the anti-sense strand. Shaded bases within the annotated binding sites are conserved across all three species. The lightly-shaded box indicates the position of a putative paired Pax2/SoxB1 recognition site, reminiscent of the chicken *delta-Crystallin* (DC5) and *Sox2* (N3) enhancers, which are synergistically activated by Pax6 and Sox2 in the lens placode.