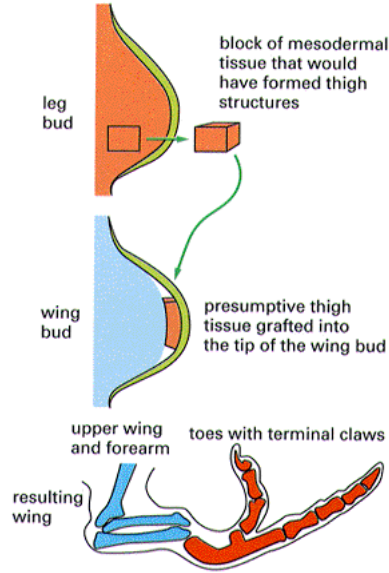


Positional information an example.



5.2 Nucleotide sequence of the human  $\beta$ -globin gene (Part 2)

(B)

Enhancer    Enhancer    Cap sequence    Promoter    Translation initiation site

ccctgtggagccacacccctagggttggccaatcactcccaggagcaggaggcaggagccaggcctgggcataaaa

gtcaggccagagccatctattgctcatttgcctctgcacacactgtgtcactagcaacctcaaacagacacacatg

ValHisLeuThrProGluGluLysSerAlaValThrAlaLeuTrpGlyLysValAsnValAspGluValGlyGlyGlu

GTCACCTGACTCCTGAGGAGAAGCTGCCTTACTGCCCTGTGGGCAAGTGAACCTGGATGAAGTTGGTGTGAG

Exon 1

AlaLeuGlyArg

GCCCTGGGACGCTGGTATCAAGGTTACAGACAGGTTTAAGGACCAATAAGAACTGGGCATGTGGAGACAGAGAG

LeuLeuValValTyr

AGCTCTGGGTTCTGATAGGCACTGACTCTCTGCTATGGTCTATTTCCACCCTTAGGCTGCTGGTGTCTAC

ProTrpThrGlnArgPhePheGluPheGlyAspLeuSerThrProAspAlaValMetClyAsnProLysValLys

CCTTGAGCCAGAGGTTCTTTRAGTCTTTGGGGATCTGCACCTCTGATGCTGTATGGGCAACCTAAGGTGAAG

Exon 2

AlaHisGlyLysLysValLeuGlyAlaPheSerAspGlyLeuAlaHisLeuAspAsnLeuLysGlyThrPheAlaThr

GCTCATGGCAAGAAAGTCTCGGTGCTTTAGTGTGGCTGCTCACCTGGACAACCTCAAGGGCAACCTTGGCACA

LeuSerGluLeuHisCysAspLysLeuHisValAspProGluAsnPheArg

CTGAGTGAGCTGCACTGACAMGTGCACTGGGATCTGCAACTCAGGCTGAGTCTATGGGACCCCTTGATGTTTT

CTTCCCCTCTCTTCTATGGTTAAGTTCATGTCATAGGAAGGGGGAAGTAACAGGGGTACAGTTAGAATGGGAAC

AGACGAATAGTTCATCAGTGTGGAAGTCTCAGGATGTTTATGTTCTTTATTTGCTGTCTATAACAATGTTTCT

TTTGTFTAATCTGTCTTCTTTTCTCTCCGCAATTTTACTATTAATGCTAGTACATTAATTAAT

AACAAAAGGAAATATCTGAGATACATTAAGTAACCTTAAAAAACAATTTACACAGTCTGCCTAGTACATTAAT

TGGAAATATGTGTGCTTATTTGCATATTCATAATCTCCCTACTTATTTCTTTTATTTTAAATGATGATAATA

TTATACATATTTATGGGTTAAAGTGAATGTTTAAATATGTGTACACATATGACCAATCAGGGAATTTGCAAT

TGTAATTTAAAAAATGTTCTTCTTTAATATACTTTTGTGTTAATCTTATTTCTAATCTTGCCTAAATCTCTT

CTTTCAGGGCAATAATGATCAATGATCATGCTCTTTGGACCATCTAAAGAATAACAGTGATAATTTCTGGGTTA

AGGCAATAGCAATATTTCTGCATATAAATATTTCTGCATATAAATGTAACATGATGAAGAGGTTTCAATTTGCTAA

TAGCAGCTACAATCCAGTACCATTCTGCTCTTTATTTATGTGTGGGATAAGCTGGATATCTGAGTCCAAGCTAG

LeuLeuGlyAsnValLeuValCysValLeuAla

GGCCTTTTGTAAATCAATGTTCACTCTTATCTCTCCACAGCTCTCTGGGCAAGTGTGCTGTGGCTAATGCCCTG

HisHisPheGlyLysGluPheThrProProValGlnAlaAlaTyrGlnLysValValAlaGlyValAlaAsnAlaLeu

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Exon 3

AlaHisLysTyrHis

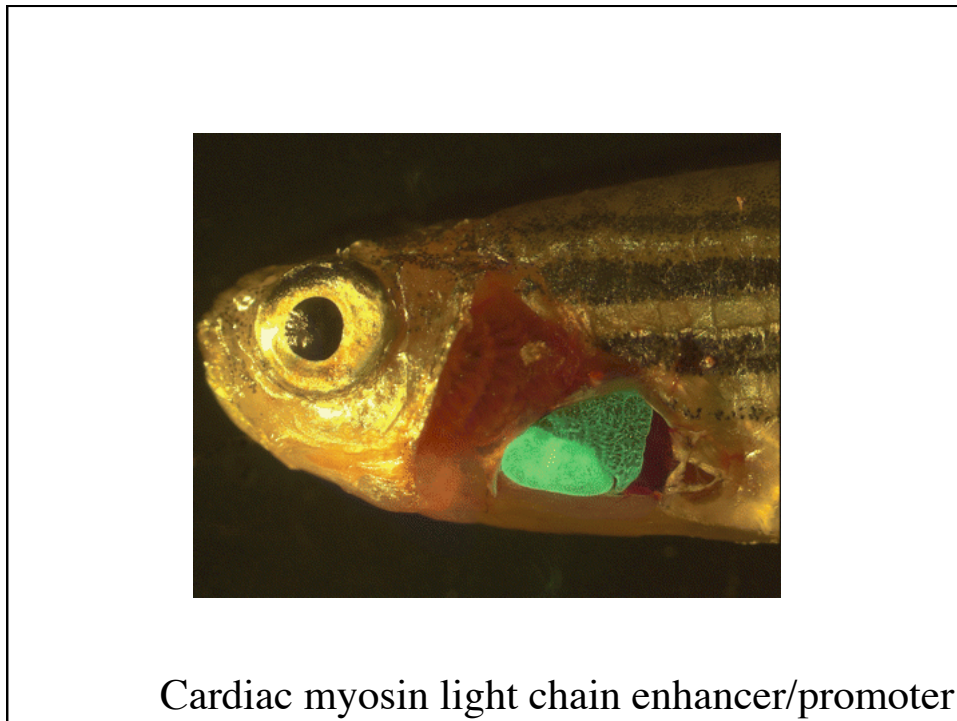
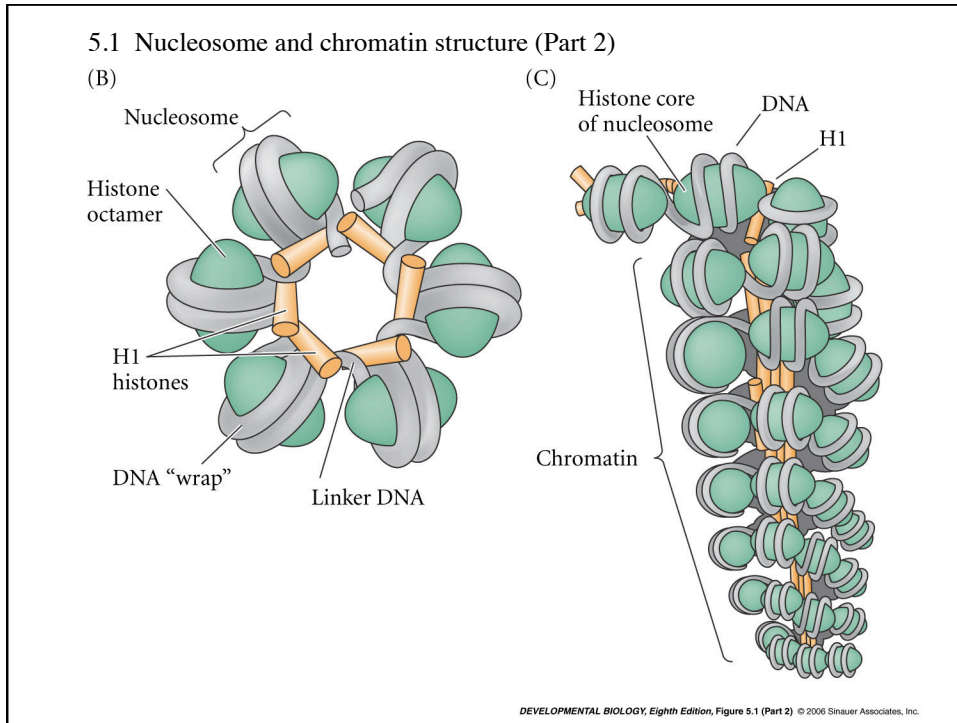
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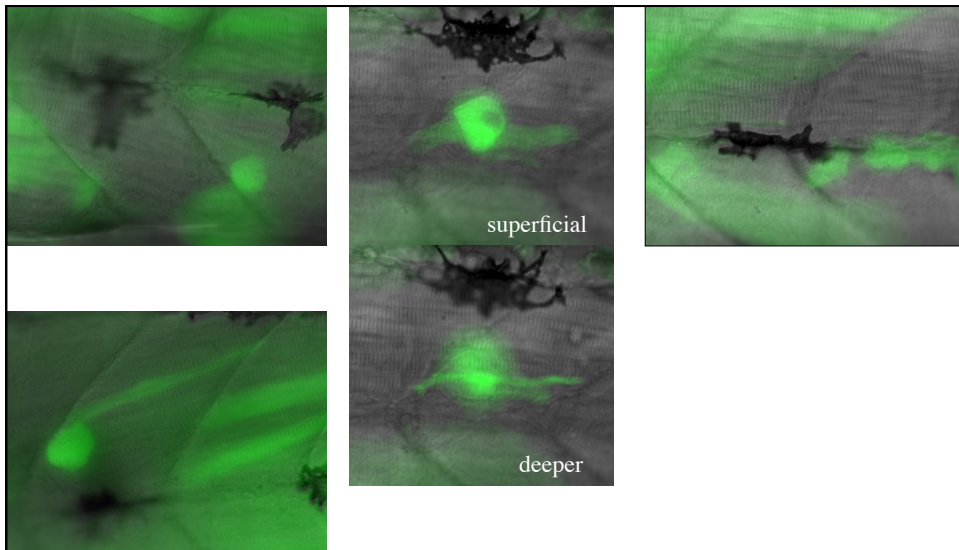
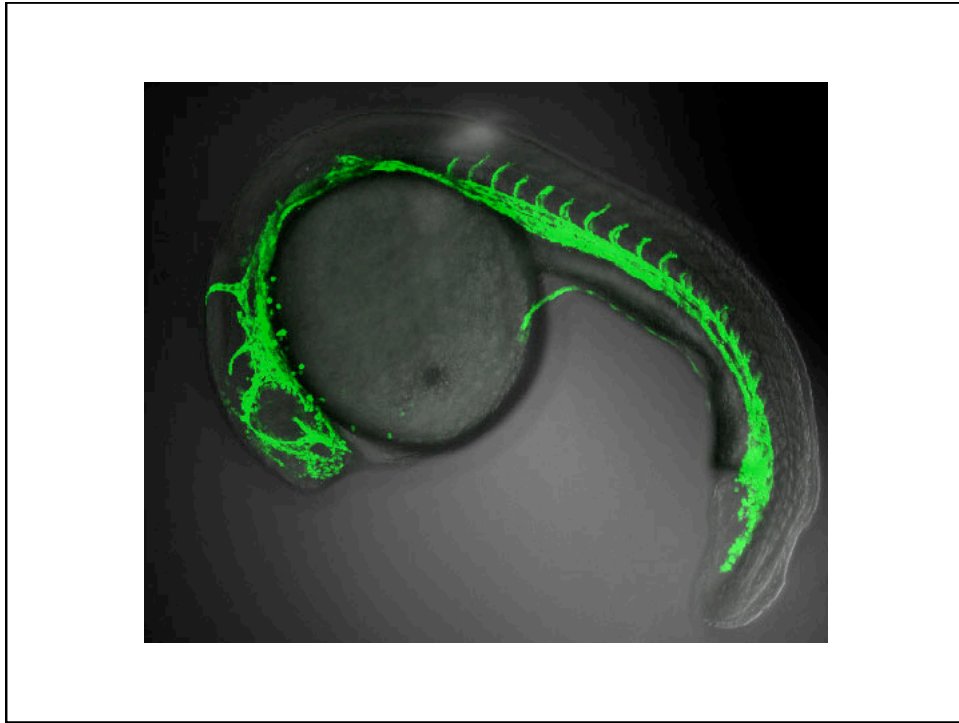
TAACTGGGGGATATATGAAGGCCCTGAGCATCTGGAATCTCCCTATAAAACATTTATTTTCATTG

Translation termination site

3' UTR

Poly(A) addition site





pax3\_2k\_EGFP, all at about 2 days stage

