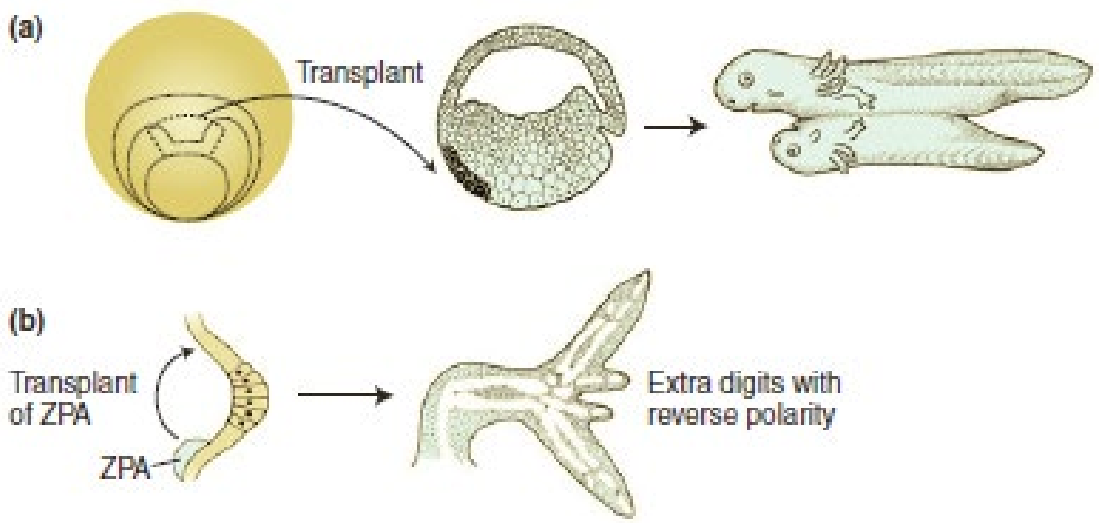
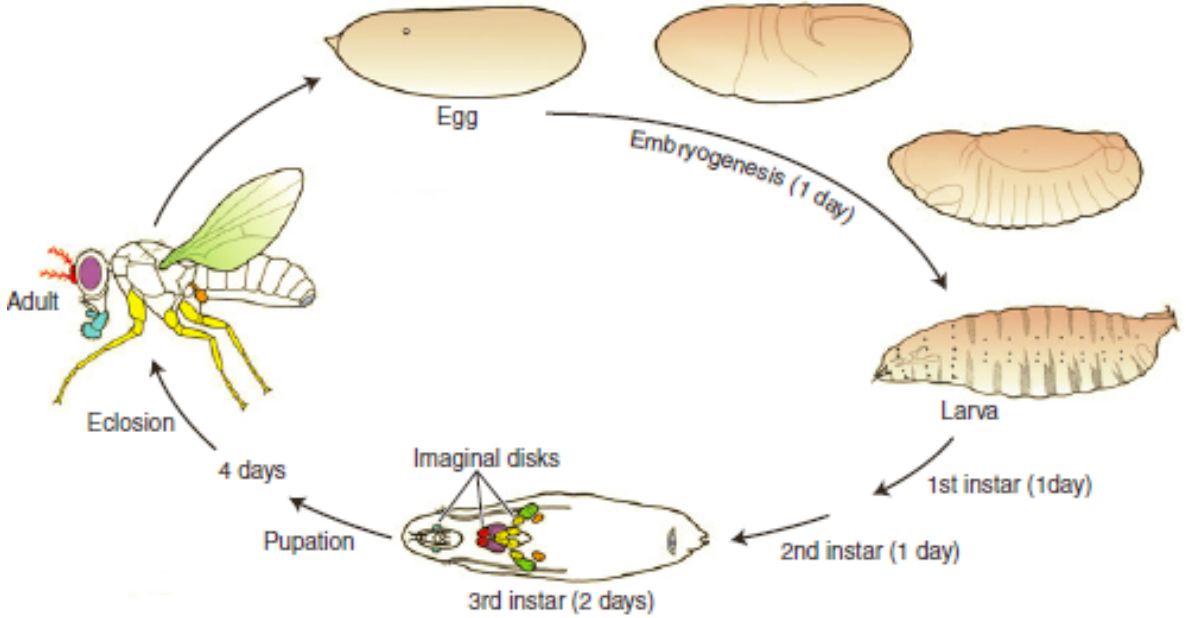
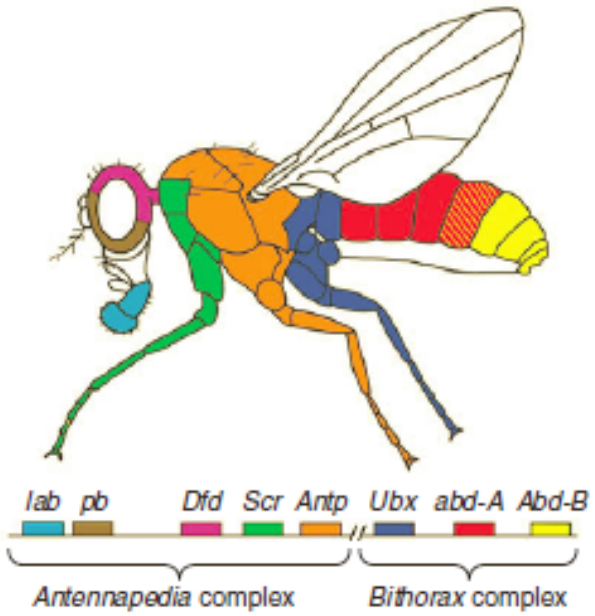
13. Gelişimin Genetik Kontrolü





Reference: Griffiths, A. J., Wessler, S. R., Lewontin, R. C., Gelbart, W. M., Suzuki, D. T., & Miller, J. H. (2005). *An introduction to genetic analysis*. Macmillan.

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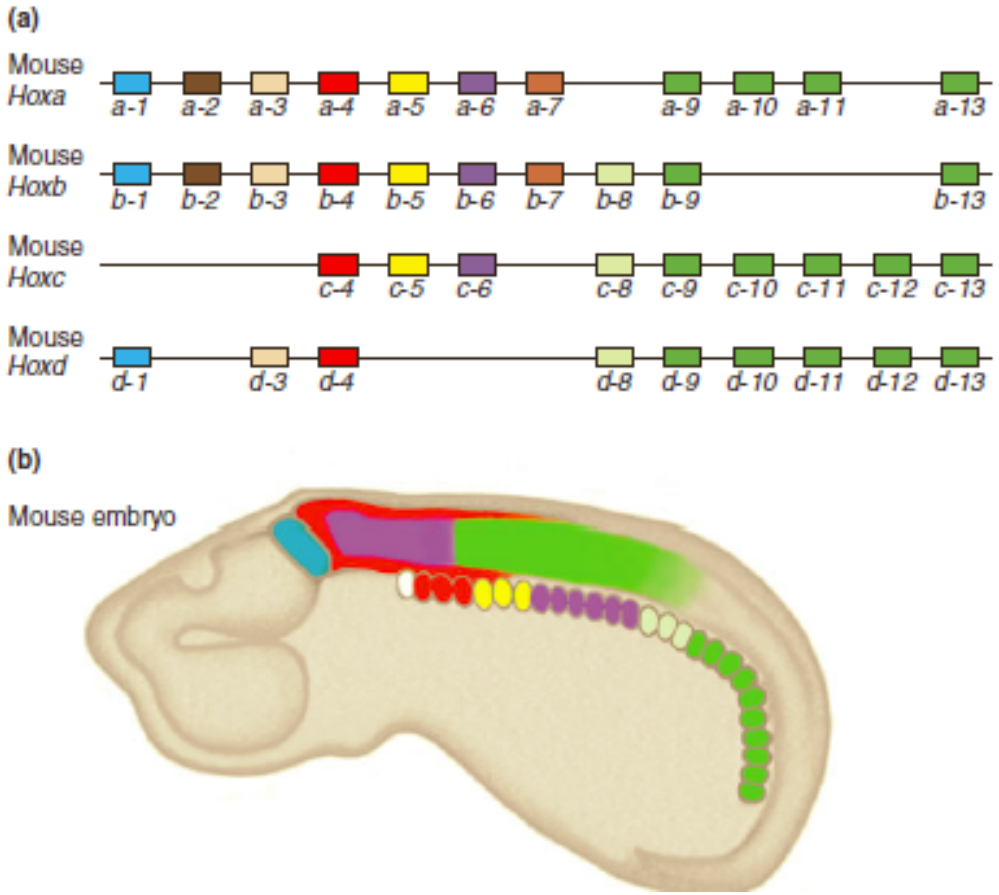
lab          NNSGRTNFTNKQLTELEKEFHFNRYLTRARRIEIANTLQLNETQVKIWFQNRRMKQKKRV
pb           PRRLRTAYTNTQLLELEKEFHFNKYLCRPRRIEIAASLDLTERQVKVWFQNRRMKHKRQT
Dfd          PKRQRTAYTRHQILELEKEFHYNRYLTRRRRIEIAHTLVLSERQIKIWFQNRRMKWKKDN
Scr          TKRQRTSYTRYQTLELEKEFHFNRYLTRRRRIEIAHALCLTERQIKIWFQNRRMKWKKEH
Antp         RKRGRQTYTRYQTLELEKEFHFNRYLTRRRRIEIAHALCLTERQIKIWFQNRRMKWKKEN
Ubx          RRRGRQTYTRYQTLELEKEFHTNHYLTRRRRIEMAHALCLTERQIKIWFQNRRMKLKKEI
abd-A        RRRGRQTYTRFQTLELEKEFHFNHYLTRRRRIEIAHALCLTERQIKIWFQNRRMKLKKEL
abd-B        VRKKRKPYSKFQTLELEKEFLFNAYVSKQKRWELARNLQLTERQVKIWFQNRRMKNKKNS

Consensus    -RRGRT-YTR-QTLELEKEFHFNRYLTRRRRIEIAHALCLTERQIKIWFQNRRMK-KKE-
sequence                        Helix 1          Helix 2          Helix 3
```

Reference: Griffiths, A. J., Wessler, S. R., Lewontin, R. C., Gelbart, W. M., Suzuki, D. T., & Miller, J. H. (2005). *An introduction to genetic analysis*. Macmillan.

Fly *Dfd*	PKRQRTAYTRHQILELEKEFHYNRYLTRRRRIEIAHTLVLSERQIKIWFQNRRMKWKKDN KLPNTKNVR
Amphibian *Hox4*	TKRSRTAYTRQQVLELEKEFHFNRYLTRRRRIEIAHSLGLTERQIKIWFQNRRMKWKKDN RLPNTKTRS
Mouse *HoxB4*	PKRSRTAYTRQQVLELEKEFHYNRYLTRRRRVEIAHALCLSERQIKIWFQNRRMKWKKDH KLPNTKIRS
Human *HoxB4*	PKRSRTAYTRQQVLELEKEFHYNRYLTRRRRVEIAHALCLSERQIKIWFQNRRMKWKKDH KLPNTKIRS
Chick *HoxB4*	PKRSRTAYTRQQVLELEKEFHYNRYLTRRRRVEIAHSLCLSERQIKIWFQNRRMKWKKDH KLPNTKIRS
Frog *HoxB4*	AKRSRTAYTRQQVLELEKEFHYNRYLTRRRRVEIAHTLRLSERQIKIWFQNRRMKWKKDH KLPNTKIKS
Fugu *HoxB4*	PKRSRTAYTRQQVLELEKEFHYNRYLTRRRRVEIAHTLCLSERQIKIWFQNRRMKWKKDH KLPNTKVRS
Zebrafish *HoxB4*	AKRSRTAYTRQQVLELEKEFHYNRYLTRRRRVEIAHTLRLSERQIKIWFQNRRMKWKKDH KLPNTKIKS



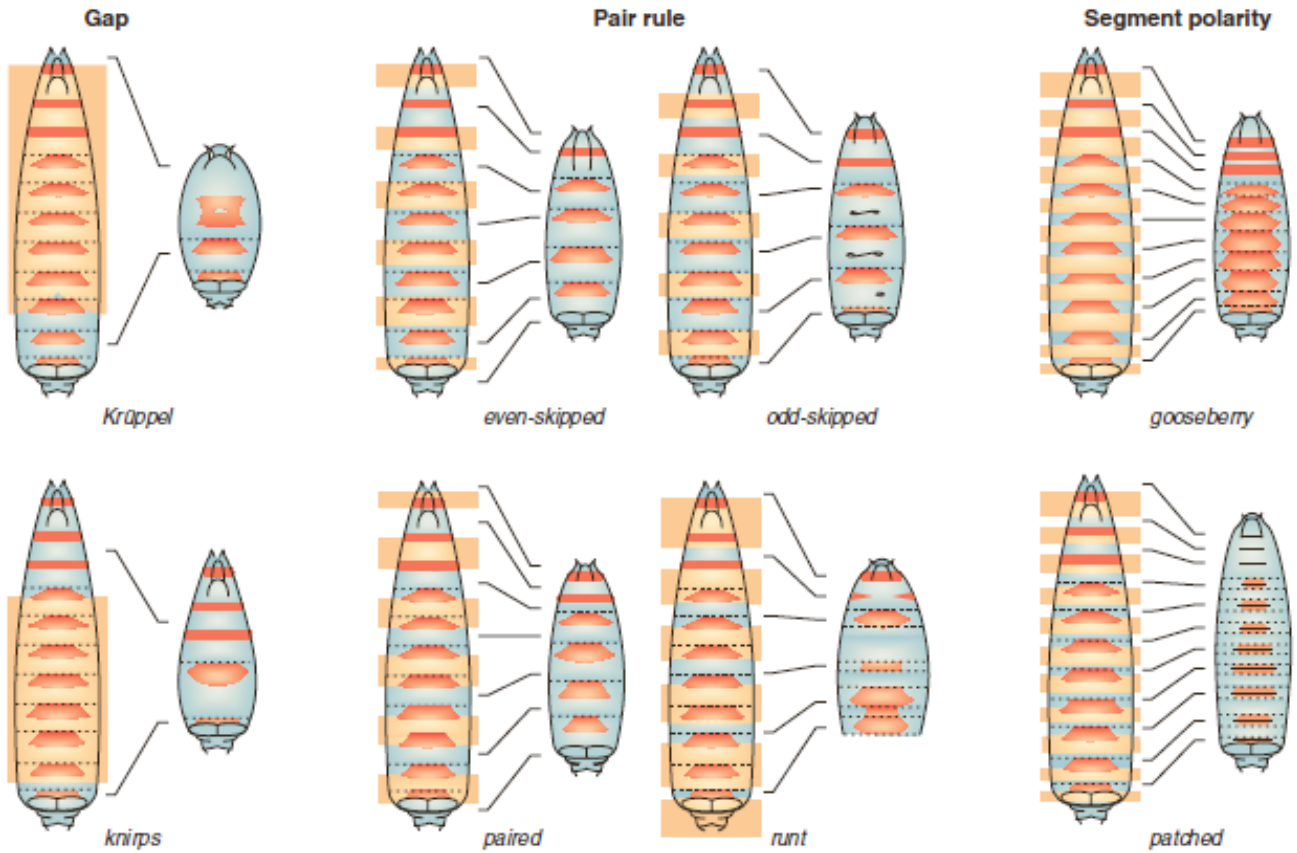
Reference: Griffiths, A. J., Wessler, S. R., Lewontin, R. C., Gelbart, W. M., Suzuki, D. T., & Miller, J. H. (2005). *An introduction to genetic analysis*. Macmillan.

MATERNALLY REQUIRED GENES

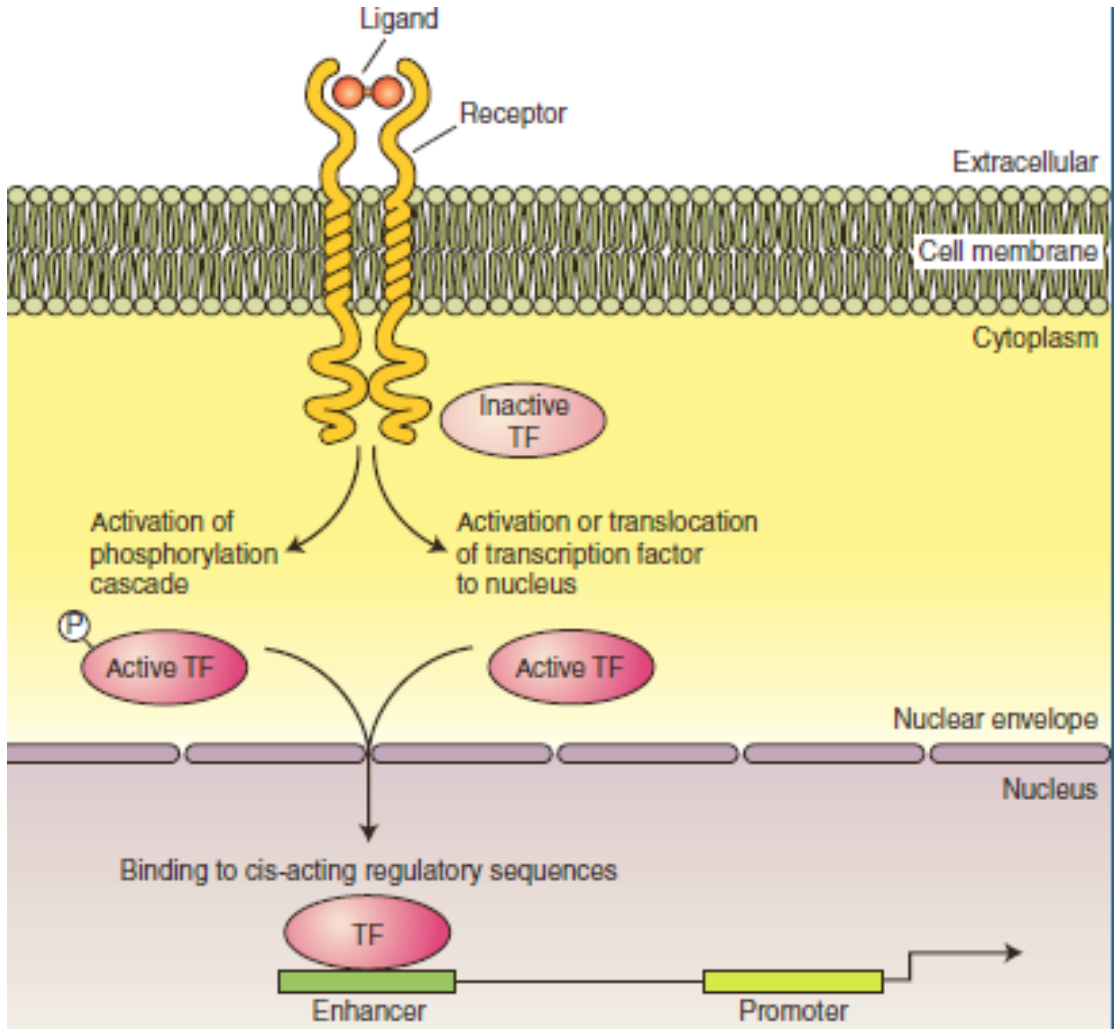
Parents		Offspring	
m/+ ♂ × *m*/+ ♀	→	*m*/*m*, *m*/+, +/+	all normal
m/*m* ♂ × *m*/+ ♀	→	*m*/*m*, *m*/+	all normal
+/+, *m*/+, or *m*/*m* ♂ × ***m*/*m*** ♀	→	*m*/+, *m*/*m*	**all mutant phenotype**

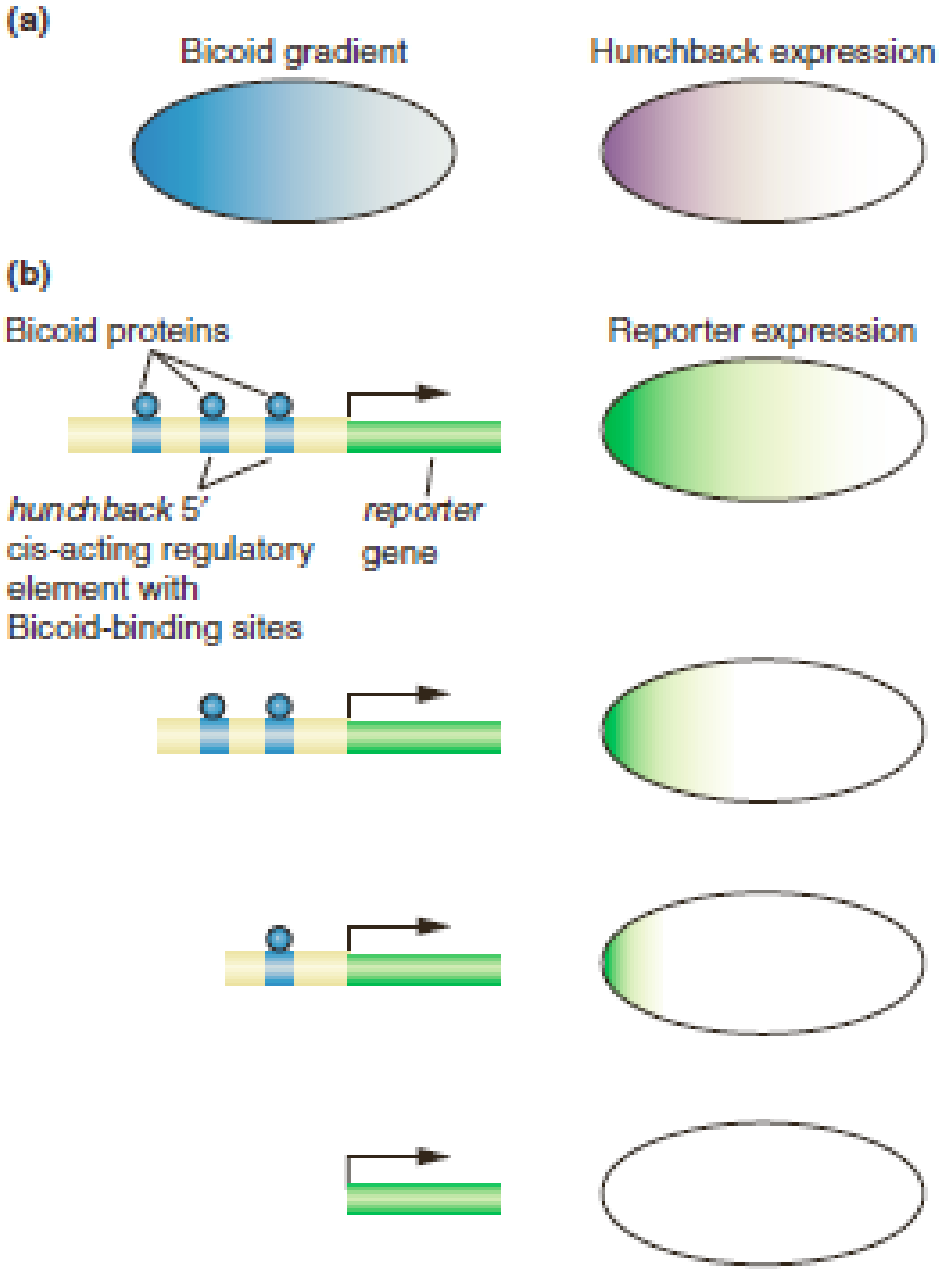
ZYGOTICALLY REQUIRED GENES

Parents		Offspring	
m/+ ♂ × *m*/+ ♀	→	*m*/+, +/+	normal
		m*/*m	**mutant phenotype**

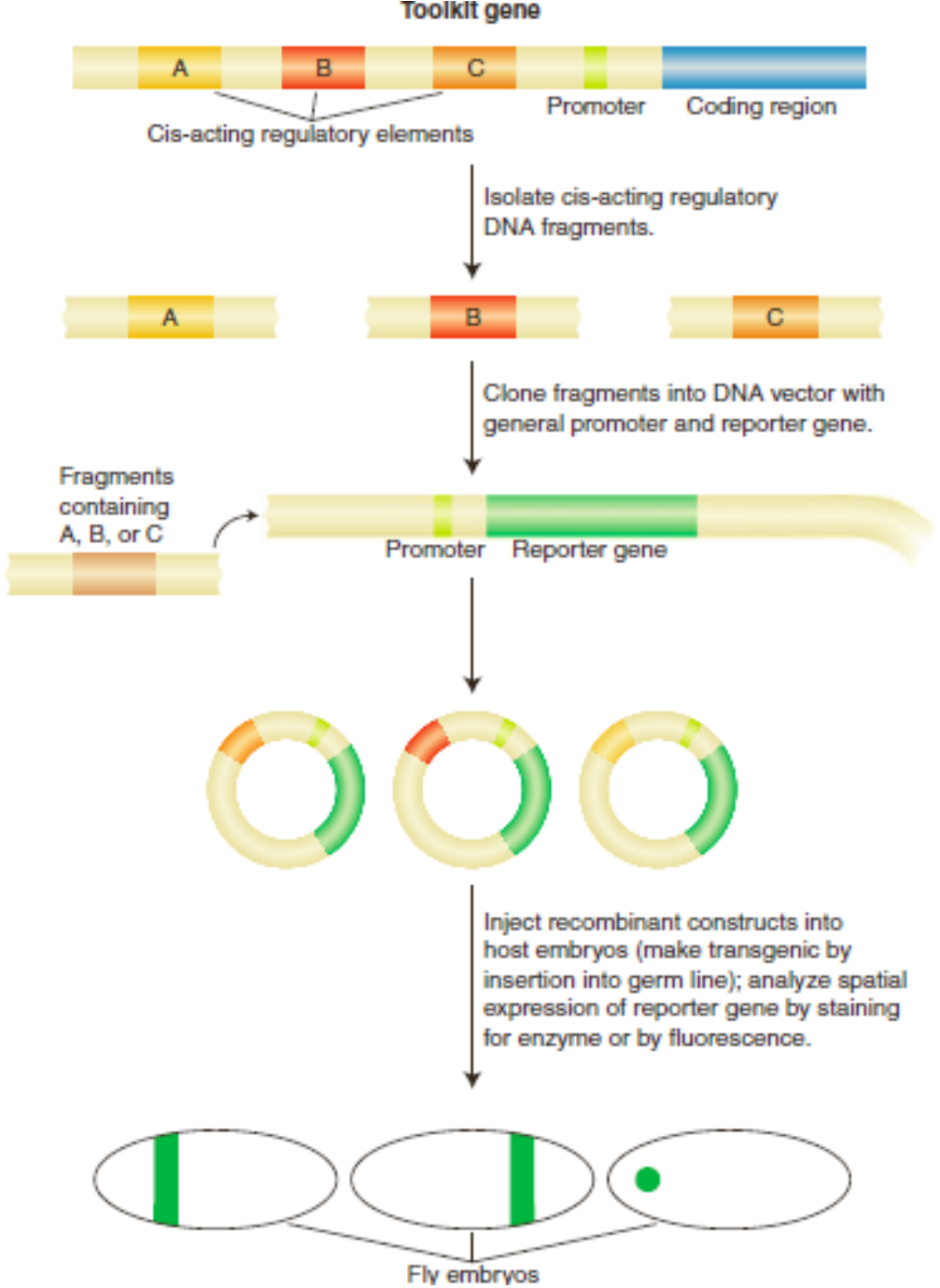


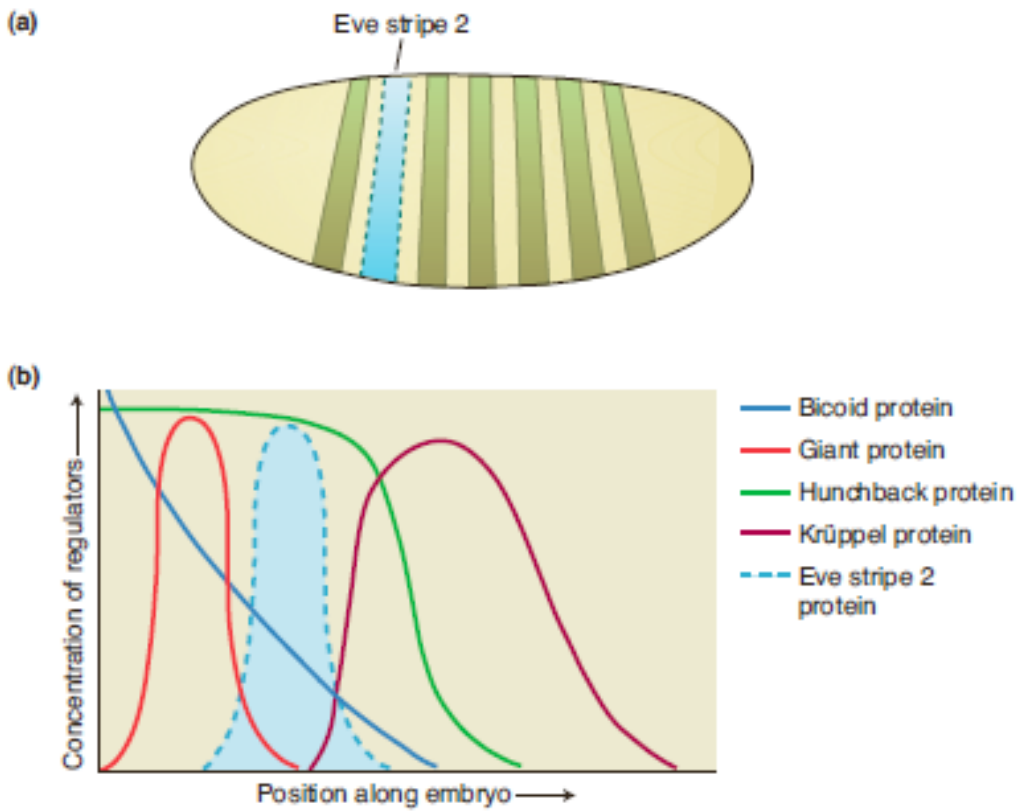
Reference: Griffiths, A. J., Wessler, S. R., Lewontin, R. C., Gelbart, W. M., Suzuki, D. T., & Miller, J. H. (2005). *An introduction to genetic analysis*. Macmillan.



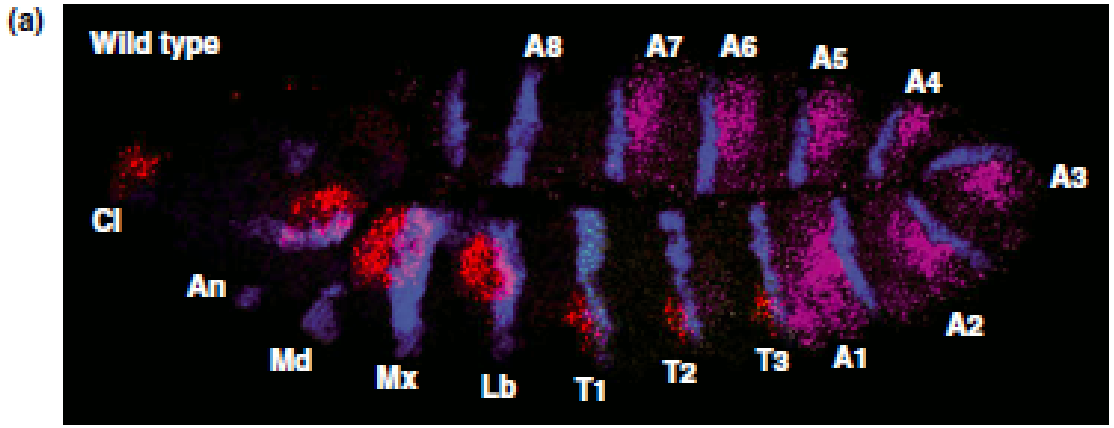


Reference: Griffiths, A. J., Wessler, S. R., Lewontin, R. C., Gelbart, W. M., Suzuki, D. T., & Miller, J. H. (2005). *An introduction to genetic analysis*. Macmillan.

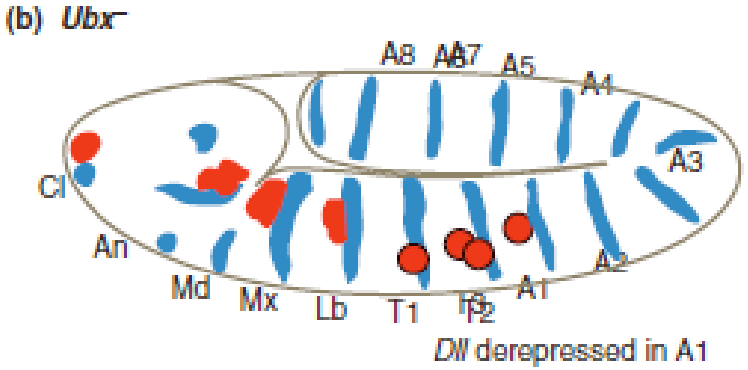




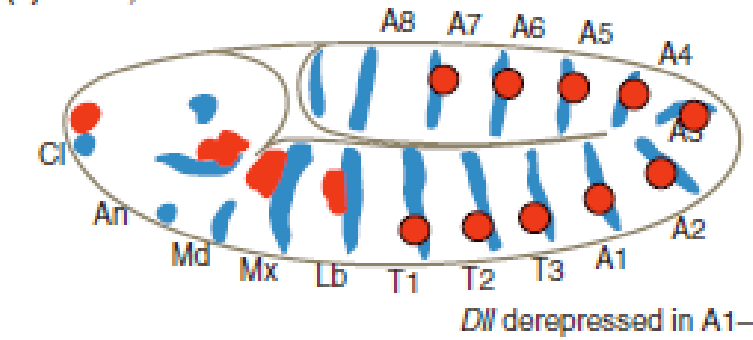
Reference: Griffiths, A. J., Wessler, S. R., Lewontin, R. C., Gelbart, W. M., Suzuki, D. T., & Miller, J. H. (2005). *An introduction to genetic analysis*. Macmillan.



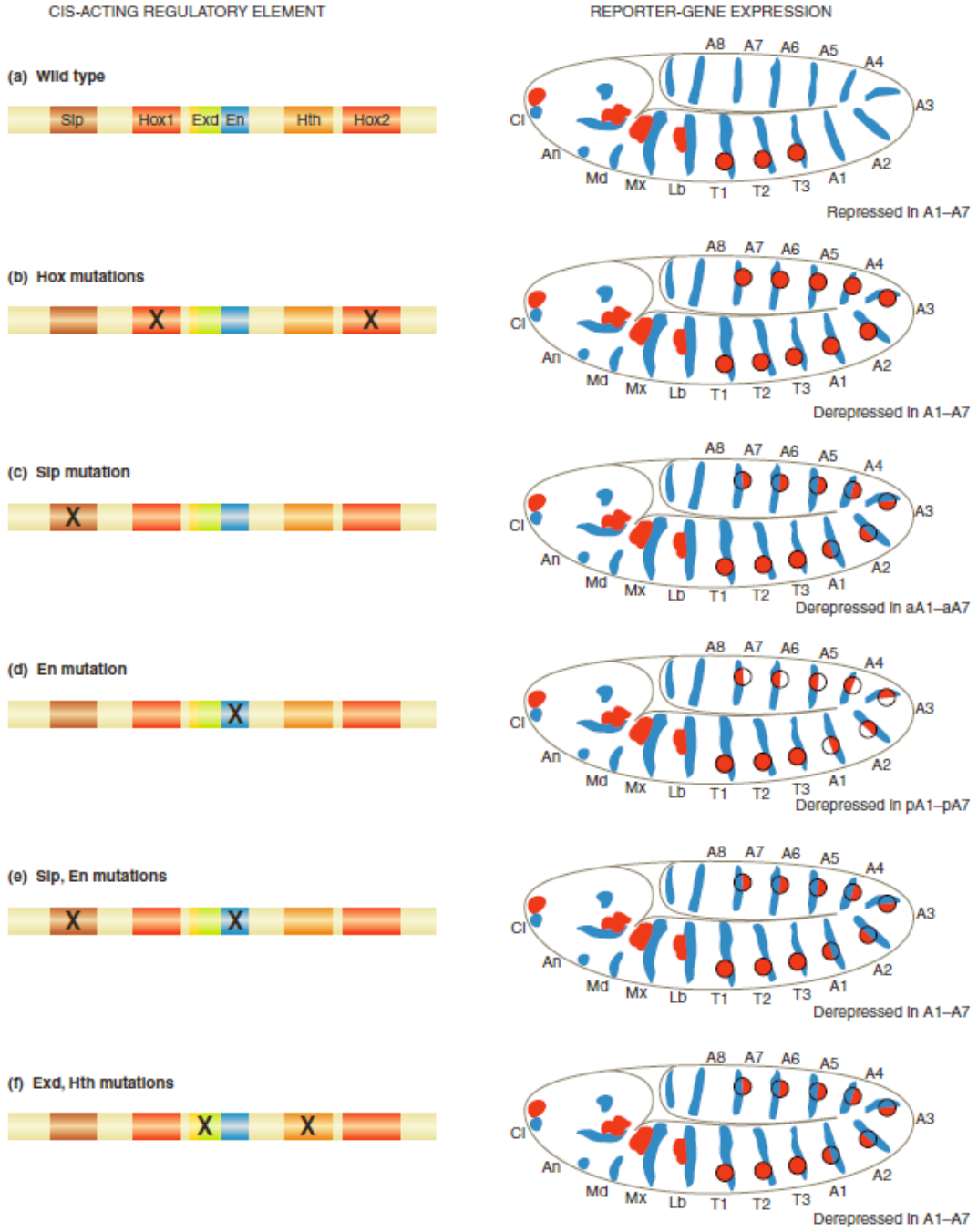
Dll (red) repressed in A1–A8



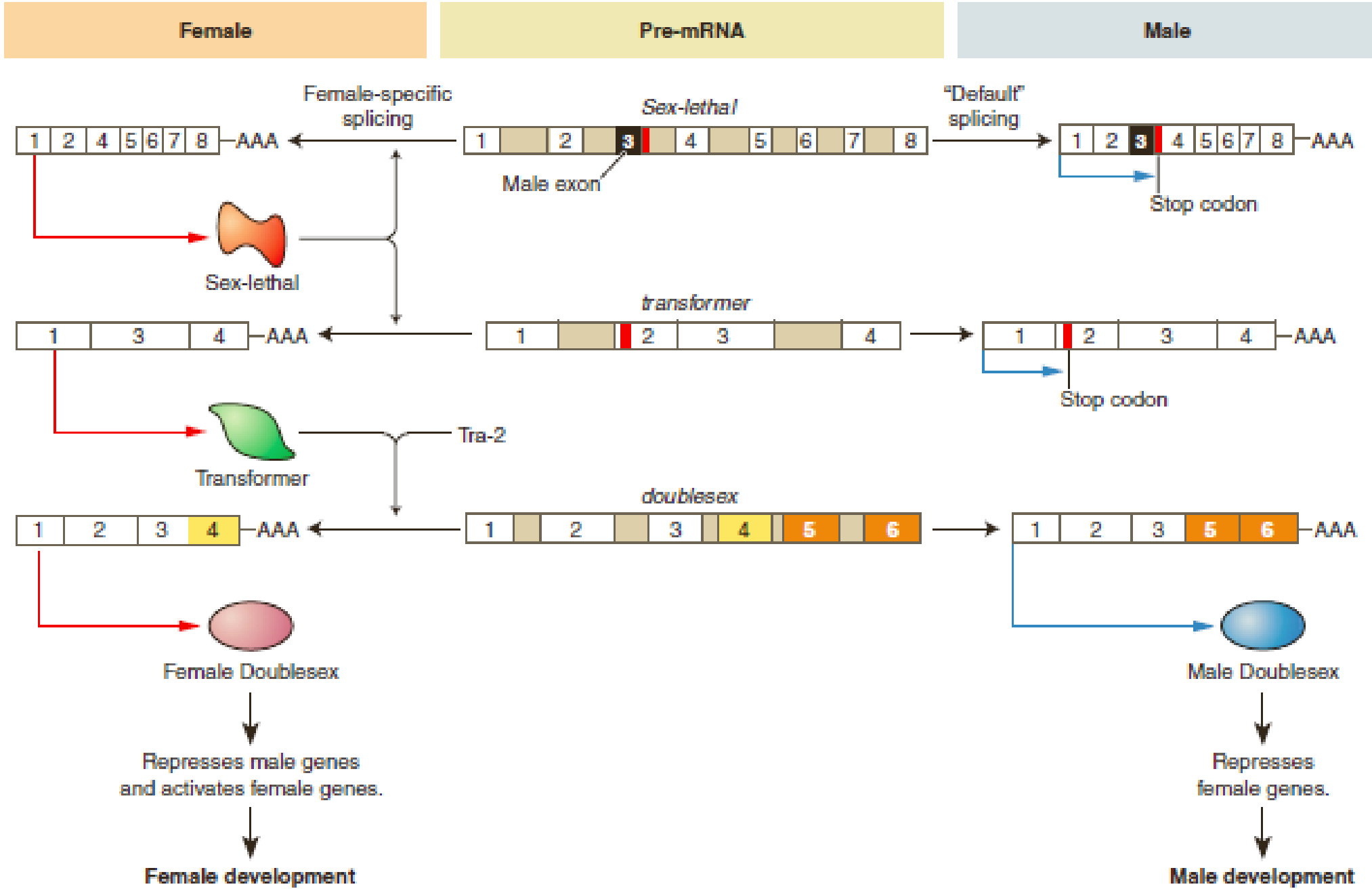
Dll derepressed in A1



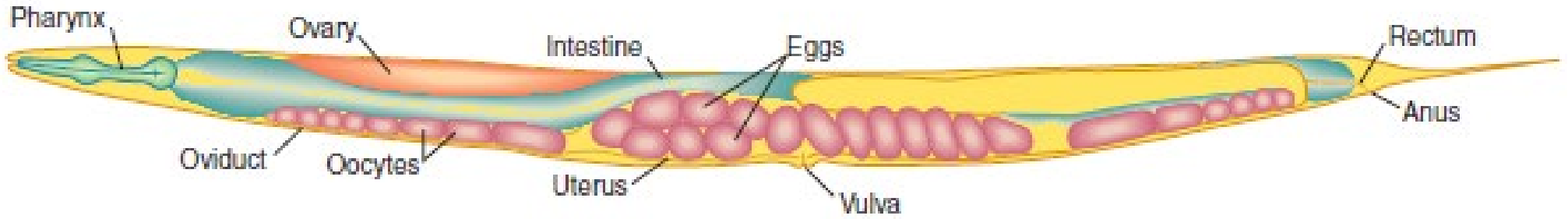
Dll derepressed in A1–A7

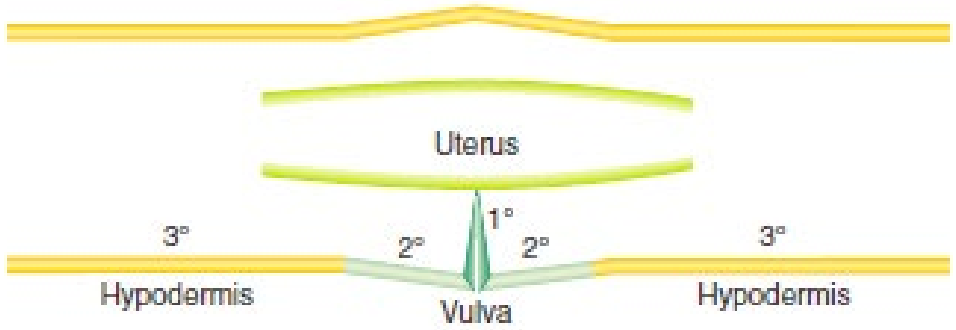


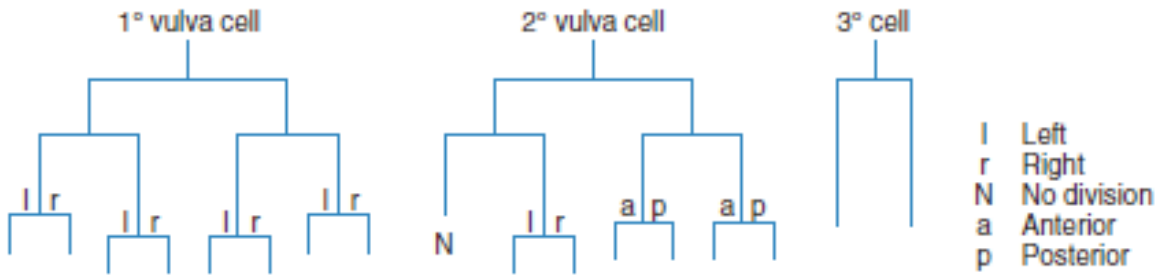
Reference: Griffiths, A. J., Wessler, S. R., Lewontin, R. C., Gelbart, W. M., Suzuki, D. T., & Miller, J. H. (2005). *An introduction to genetic analysis*. Macmillan.



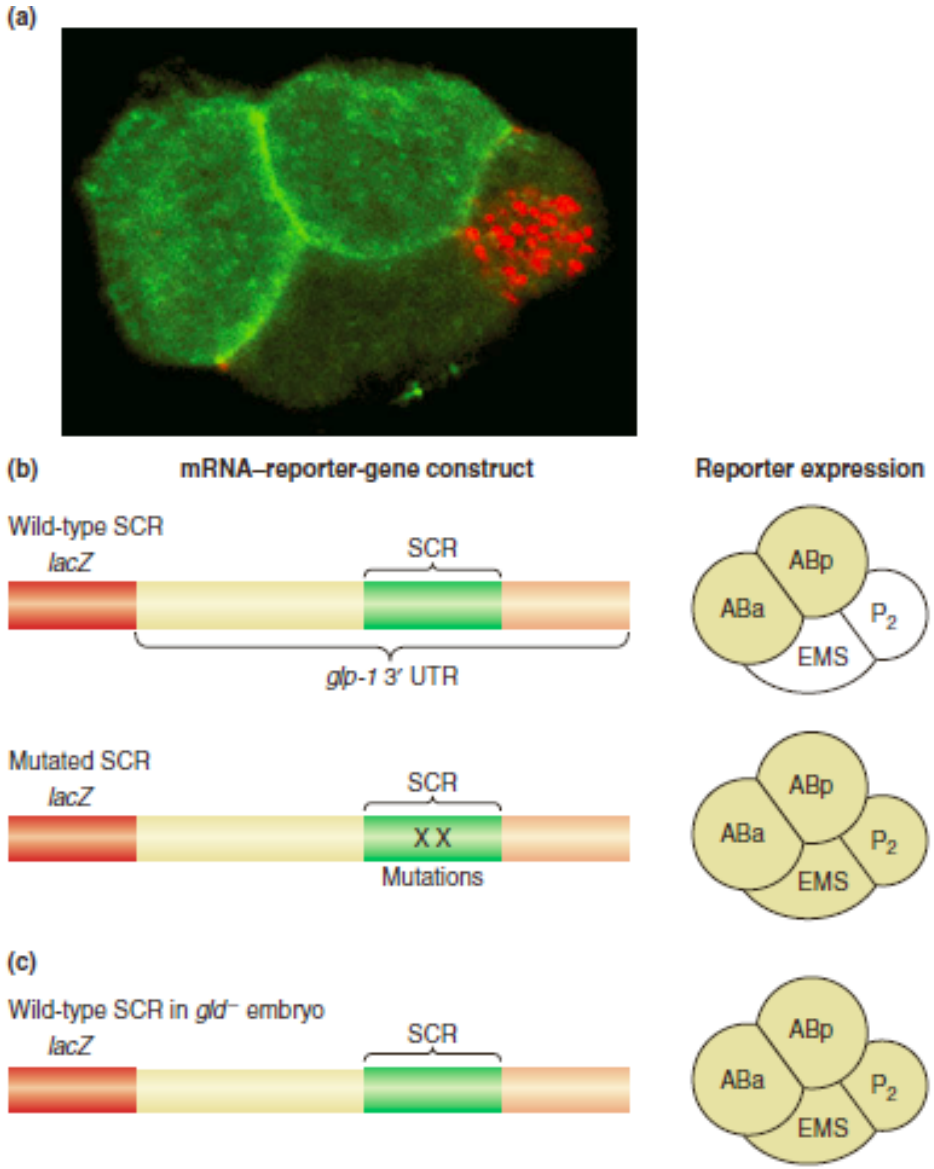
Reference: Griffiths, A. J., Wessler, S. R., Lewontin, R. C., Gelbart, W. M., Suzuki, D. T., & Miller, J. H. (2005). *An introduction to genetic analysis*. Macmillan.

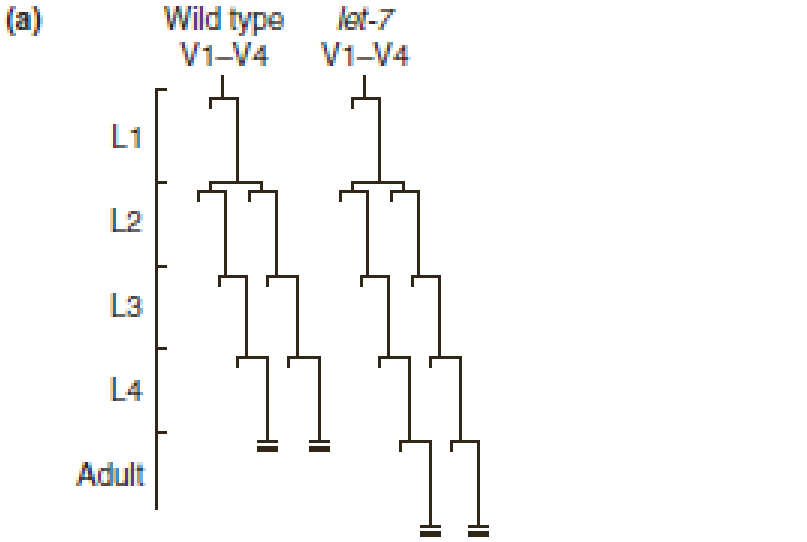






Reference: Griffiths, A. J., Wessler, S. R., Lewontin, R. C., Gelbart, W. M., Suzuki, D. T., & Miller, J. H. (2005). *An introduction to genetic analysis*. Macmillan.





Reference: Griffiths, A. J., Wessler, S. R., Lewontin, R. C., Gelbart, W. M., Suzuki, D. T., & Miller, J. H. (2005). *An introduction to genetic analysis*. Macmillan.