

SUMMARY: Main genes involved in specifying pattern in the early *Drosophila* embryo

	Gene	Maternal/ zygotic	Nature of protein	Transcription factor (T), receptor (R), or signal protein (S)	Function (where known)	
Antero-posterior system	<i>bicoid</i>	M	Homeodomain	T	Morphogen, provides positional information along AP axis	
	<i>hunchback</i>	M/Z	Zinc fingers	T	Morphogen, provides positional information along AP axis	
	<i>nanos</i>	M	RNA-binding protein		Helps to establish AP gradient of hunchback protein	
	<i>caudal</i>	M	Homeodomain	T	Involved in specifying posterior region	
	<i>gurken</i>	M	Secreted protein of TGF- α family	S	Posterior oocyte-follicle cell signaling	
	<i>oskar</i>	M			Pole-cell determination	
Terminal system	<i>torso</i>	M	Receptor tyrosine kinase	R	Terminal specification	
	<i>trunk</i>	M		S	Ligand for torso	
Gap genes	<i>hunchback</i>	Z	Zinc fingers	T	} Localize pair-rule gene expression	
	<i>Krüppel</i>	Z	Zinc fingers	T		
	<i>knirps</i>	Z	Zinc fingers	T		
	<i>giant</i>	Z	Leucine fingers	T		
	<i>tailless</i>	Z	Zinc fingers	T		
Pair-rule genes	<i>even-skipped</i>	Z	Homeodomain	T	Delimits odd-numbered parasegments	
	<i>fushi tarazu</i>	Z	Homeodomain	T	Delimits even-numbered parasegments	
Segmentation and segment patterning	<i>engrailed</i>	Z	Homeodomain	T	Defines anterior region of parasegment and posterior region of segment	
	<i>hedgehog</i>	Z	Secreted	S	} Components of signaling pathways that pattern segments and stabilize compartment boundaries	
	<i>wingless</i>	Z	Secreted	S		
	<i>frizzled</i>	Z	7-span receptor for Wingless	R		
	<i>patched</i>	Z	12-span receptor for Hedgehog	R		
	<i>smoothed</i>	Z	7-span receptor	R		
	<i>Notch</i>	Z	Membrane receptor	R		
	<i>Serrate</i>	Z	Membrane-bound ligand for Notch	S		
Selector genes bithorax complex	<i>Ultrabithorax</i>	Z	Homeodomain	T	} Combinatorial activity confers identity on parasegments 5–13	
	<i>abdominal-A</i>	Z	Homeodomain	T		
	<i>Abdominal-B</i>	Z	Homeodomain	T		
Antennapedia complex	<i>Deformed</i>	Z	Homeodomain	T	} Combinatorial activity confers identity on parasegments anterior to 5	
	<i>Sex combs reduced</i>	Z	Homeodomain	T		
	<i>Antennapedia</i>	Z	Homeodomain	T		
	<i>labial</i>	Z	Homeodomain	T		
Maintenance genes	Polycomb group	Z		T	} Maintain state of homeotic genes	
	Trithorax	Z		T		
Dorso-ventral system	Maternal genes	<i>Toll</i>	M	Membrane	R	Activation results in Dorsal protein entering nucleus
		<i>spätzle</i>	M	Extracellular	S	Ligand for Toll protein
		<i>dorsal</i>	M		T	Morphogen, sets dorso-ventral polarity
		<i>tube</i>	M	Adaptor protein		} Components of the Toll signaling pathway leading to Dorsal protein entering nuclei
		<i>pelle</i>	M	Protein kinase		
	<i>cactus</i>	M	Cytoplasmic inhibitor		Specifies oocyte axis	
	<i>gurken</i>	M	Secreted protein of TGF- α family	S		
	<i>pipe</i>	M	Sulfotransferase	Enzyme	Part of pathway leading to Spätzle processing	
	Zygotic genes	<i>twist</i>	Z	Helix-loop-helix	T	} Define mesoderm
		<i>snail</i>	Z	Zinc finger	T	
<i>rhomboid</i>		Z	Membrane protein	S		
<i>zerknüllt</i>		Z	Homeodomain	T		
<i>decapentaplegic</i>		Z	Secreted protein of TGF- β family	S	} Confer regional identity on dorso-ventral axis	
<i>talloid</i>		Z	BMP-1 family	S		
<i>short gastrulation</i>		Z		S		
<i>lalion</i>		Z		S		

AP, antero-posterior; TGF, transforming growth factor.

Fig. S1.1