

Table S2. Some well known developmental cell lineage datasets that are not amenable to our analysis

Species	Database/Reference	Unmet requirement(s) Refer to Table S1 for details	Note
	http://zfin.org/ and http://www.embl.de/digitalembryo/fish.html		
<i>Danio rerio</i> (Zebrafish)	Keller PJ, et al. 2008. Reconstruction of Zebrafish Early Embryonic Development by Scanned Light Sheet Microscopy. <i>Science</i> 322: 1065–1069.	1, 4	
	http://www.embl.de/digitalembryo/fly.html		
<i>Drosophila melanogaster</i> (Fly)	Keller PJ, et al. 2010. Fast, high-contrast imaging of animal development with scanned light sheet-based structured-illumination microscopy. <i>Nat Meth</i> 7: 637–642.	1, 4	
<i>Capitella teleta</i> (Polychaete worm)	Meyer NP, et al. 2010. A comprehensive fate map by intracellular injection of identified blastomeres in the marine polychaete <i>Capitella teleta</i> . <i>EvoDevo</i> 1: 8.	1	
<i>Gallus gallus</i> (Chicken)	Garcia-Lopez R, Pombero A, Martinez S. 2009. Fate map of the chick embryo neural tube. <i>Development, Growth & Differentiation</i> 51: 145–165.	1, 2	Similar for non-zygote based fate maps of several other species
<i>Xenopus laevis</i> (frog)	http://www.xenbase.org/anatomy/atlas.do	1	
<i>Hirudo medicinalis</i> (Leech)	Gline SE, Kuo D-H, Stolfi A, Weisblat DA. 2009. High resolution cell lineage tracing reveals developmental variability in leech. <i>Dev Dyn</i> 238: 3139–3151.	4	
	http://www.bio.davidson.edu/Courses/genomics/mirror/urchin/u0urnt.htm		
<i>Strongylocentrotus purpuratus</i> (Sea urchin)	Rubio-Guivernau JL, et al. 2009. Combining sea urchin embryo cell lineages by error-tolerant graph matching. <i>Conf Proc IEEE Eng Med Biol Soc</i> 2009: 5918–5921.	4	
<i>Halicephalobus gingivalis</i> (Nematode)	Houthoofd W, Borgonie G. 2007. The embryonic cell lineage of the nematode <i>Halicephalobus gingivalis</i> (Nematoda: Cephalobina: Panagrolaimoidea). <i>Nematology</i> 9: 573–584.	3	
<i>Rhabditophanes sp. KR 3021</i> (fam. Alloionematidae) (Nematode)	Houthoofd W, et al. 2008. The embryonic cell lineage of the nematode <i>Rhabditophanes sp.</i> <i>Int J Dev Biol</i> 52: 963–967.	3	