Data S1T | Database of tissue morphodynamics for TARDIS embryo A

Set of multi-frame TIFF images containing the morphodynamics maps of all labeled tissues for TARDIS embryo A. In total, there are 11 labeled tissues and three multi-frame TIFF images per tissue (with each frame corresponding to one time point), resulting in 33 files that contain quantitative information on local tissue movements along the x-axis (δ_x^{i,U_j}), local tissue movements along the y-axis (δ_y^{i,U_j}) and local tissue movement speeds ($\overline{v}^{i,U_j}$). The value provided in an image at location x, y, z represents the δ_x^{i,U_j}, δ_y^{i,U_j} or $\overline{v}^{i,U_j}$ measurement at grid coordinate (x, y) at time point z, as defined in equations 35-37 of the STAR Methods. Please see STAR Methods, section "*Computation of tissue morphodynamics maps*", for a description of the grid used to partition the embryo and the Mercator-based data projection employed to compute the tissue morphodynamics maps. The file names of the TIFF images correspond to the contents described above as defined by the following naming convention:

File name	Contents
U_<tissue name>.tif	Local tissue movements along the x-axis (δ_x^{i,U_j}) at each position of the grid and as a function for time, for the tissue identified in the file name. δ_x^{i,U_j} is provided in units of radians.
V_<tissue name>.tif	Local tissue movements along the y-axis (δ_y^{i,U_j}) at each position of the grid and as a function for time, for the tissue identified in the file name. δ_y^{i,U_j} is provided in units of radians.
speed_<tissue name>.tif	Local tissue movement speed ($\overline{v}^{i,U_j}$) at each position of the grid and as a function for time, for the tissue identified in the file name. $\overline{v}^{i,U_j}$ is provided in units of µm per minute.

Correspondence between tissue names and abbreviations used in TIFF file names:

Abbreviation	Tissue name
Heart_Field	Heart field
Left_AP_Meso	Anterior paraxial mesoderm (left)
Left_LP_Spl	Lateral plate (splanchnopleure) (left)
Left_LP_Som	Lateral plate (somatopleure) (left)
Left_Somitic	Somitic mesoderm (left)
Neural_Tube	Neural tube
Notochord	Notochord
Right_AP_Meso	Anterior paraxial mesoderm (right)
Right_LP_Spl	Lateral plate (splanchnopleure) (right)
Right_LP_Som	Lateral plate (somatopleure) (right)
Right_Somitic	Somitic mesoderm (right)