Supplemental Figure 4. A decision algorithm was developed based on the five fitting coefficients. Ten Raman spectra from each of the eight tissues were used to develop the decision algorithm, and 15 spectra were used for testing the algorithm. First, the tissue spectra were divided into two groups based on the collagen content. The high collagen group (collagen > 0.5) includes epi-/dermis, supra-/intra-spinous ligament, ligamentum flavum, and dura mater. These four tissues are further categorized based on the relative ratios of protein and collagen. Epi-/dermis and dura mater can be differentiated based on their actin content. The low collagen group (collagen < 0.5) includes skeletal muscle, adipose, epidural adipose, and spinal cord. Skeletal muscle can be differentiated due to its high protein content. The remaining three tissues (adipose, epidural adipose, and spinal cord) are differentiated from one another using the relative ratio of triolein and phosphatidylcholine. Table 1 shows the tissue prediction results. All eight tissue layers can be differentiated. C1, albumin; C2, actin; C3, collagen; C4, triolein; C5, phosphatidylcholine.