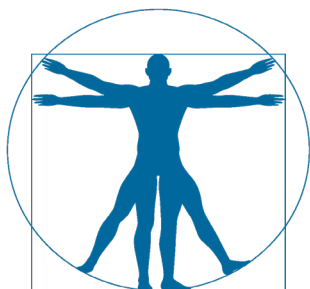




Adult Human Spinal Cord Tissue



The AnaBios Advantage

- Exceptional quality
- Ethically-consented donor samples
- Validated & translational

AnaBios is one of the only contract research organizations in the United States with access to a vast network of hospitals with human tissue and intact human spinal cord from consented donors. We have more than 10 years of experience procuring ethically-sourced human tissue samples processed utilizing proprietary methods to maximize success in experimentation involving proteomics, metabolomics and gene expression analysis. These specialized spinal cord tissue samples are ideally suited for supporting scientific research and drug discovery in therapeutic areas involving pain and itch.

SPINAL CORD TISSUE APPLICATIONS



PROTEOMICS



GENOMIC
SEQUENCING



RNASCOPE



IHC

Preserved human spinal cord tissue samples can be used to support proteomic and transcriptomic studies of the human spinal cord. Spinal cord samples are flash frozen, preserved in RNAlater or fixed by formalin-based solutions. These samples can be used for bulk extraction of RNA or for proteomic and expression analysis; or they can be processed for RNAscope or immunohistochemistry.

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FUNCTIONAL HUMAN SPINAL CORD TISSUE

Figure A

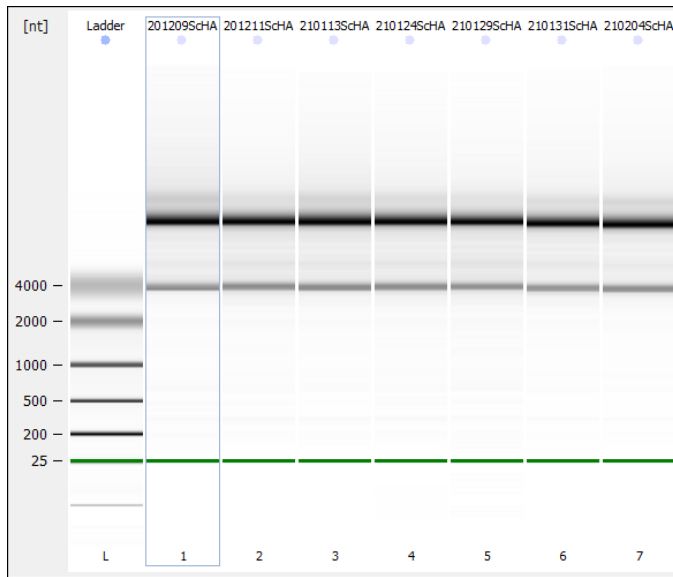
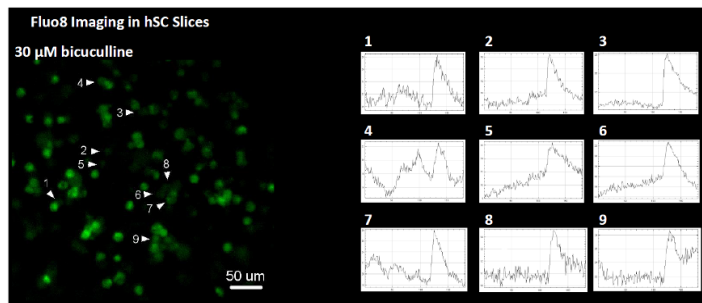


Figure A to the left shows the gel electrophoresis of the extracted RNA from flash frozen, human spinal cord tissue. Bands for 18S and 28S ribosomal RNA are clear, indicating no RNA degradation. The mean RIN score was 9.4 ± 0.1 ($n=7$, SD) as determined with an Agilent Bioanalyzer; all scores are greater than seven. This indicates that RNA is intact and was not degraded during the tissue recovery process.

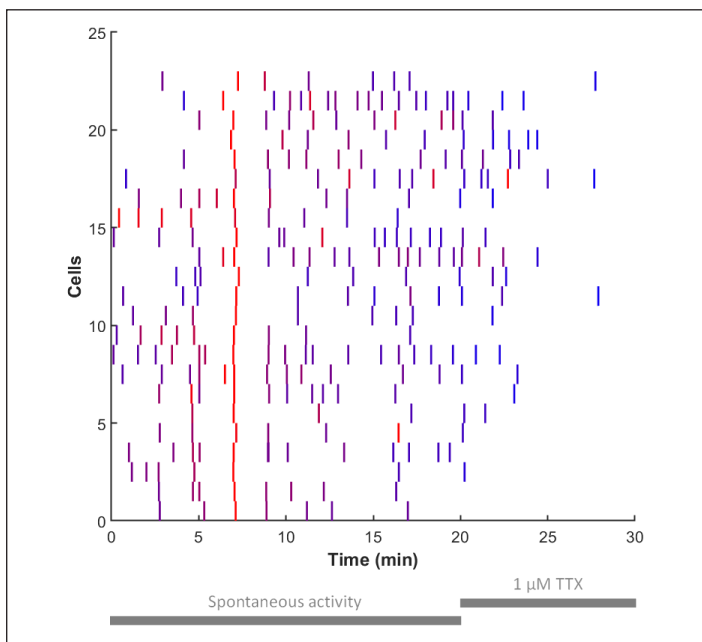
Viability of the human spinal cord is high and enables the slicing of spinal cord for electrophysiological work. The left panel of Figure B shows calcium-sensitive fluo-8 fluorescence from neurons in a spinal cord slice. The addition of $30\mu\text{M}$ bicuculline causes spontaneous calcium oscillations as exhibited in the right panel of nine identified neurons (arrows in left panel).

Figure B



In a separate experiment, spontaneous calcium activity was recorded in a spinal cord slice. Figure C shows a raster plot with sticks identifying the time location of the peaks of spontaneous calcium transients. $1\mu\text{M}$ TTX was added at 20 seconds which caused an inhibition of the spontaneous transients.

Figure C



HIGH-QUALITY TISSUE

AnaBios offers high-quality human spinal cord tissue ethically-sourced from consenting donors. Our tissue samples are processed utilizing proprietary methods to maximize preservation of physiological function and success in experimentation involving functional end points or gene expression analysis, proteomics and metabolomics. AnaBios offers normal and diseased human spinal cord tissue in frozen, formalin-fixed and RNA-later[®]. In addition, we provide demographic details, including sex, age, race and body mass index. For more information about our human tissue samples, please email info@anabios.com or call (868) 366-8608.

AnaBios
Early Human Insights