Zebrafish microdissection instruments

ZEBRAFISH SURGICAL INSTRUMENT KIT I

WPZ00018 Kit Includes:

- Probe, 0.25 mm Tips, 45° angle, 15 cm (**WPI0218**)
- Probe, 0.25 mm Tips, 15 cm (WPI0118)
- Student Vannas Scissors, 9 cm, Straight, 500 µm Tip (501777)
- Microdissecting Forceps, 10.2 cm, Angled, Serrated (504479)

OTHER ACCESSORIES



ZEBRAFISH SURGICAL INSTRUMENT KIT 2

WPZ00218 Kit Includes:

- Probe, 0.25 mm tips, 15 cm (WPI0118)
- Probe, 0.25 mm Tips, 45° angle, 15 cm (WPI0218)
- Noyes Scissors, 12 cm, Straight, Sharp/Sharp, 15 mm Blades (500228)
- Tissue Forceps,1x2 Teeth (15918)
- Iris Forceps, 10 cm, Curved, Serrated (15915)



ZEBRAFISH RESEARCH Make your Zebrafish Research Easy & Cost-Effective



and Z-MOLDS were used in this application. The CardioPhys[™] Z ECG is not shown. is perfect for small applications. close to the pipette tip, eliminating air bubble formation.



Z-MOLDS Microinjection & Transplantation Molds (4 per kit) are turned up-side down and placed in liquid agarose gel. Pipette the embryos into the grooves. The embryos self-

WPI0118

WPI0218

500228

15918

15915





The WPI M3301 Micromanipulators, Electrode Holders, Pre-Pulled Glass Micropipttes Popular MiniStar peristaltic pump WPI's MicroFil^m fills micropipettes easily and reliably by starting

References

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WORLD PRECISION INSTRUMENTS

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SOLUTIONS FOR STUDIES WITH ZEBRAFISH AT DIFFERENT LIFE STAGES

Oocytes, Embryo, Larvae and Adults





The customizable Zebrafish Microinjection Toolbox includes components favored by researchers: SYS-PV820/SYS-PV830 Pneumatic PicoPump, PUL-1000 Micropipette Puller, PZMTIII-MI/PZMIII-MI Trinocular or Binocular Microscope on lighted base with articulating mirror, PRO-300HDS High Definition Camera and Monitoring System, MICROePORE™ Cell Penetrator to facilitate microinjections, and accessories. The NANOLITER2010 Injector and the UMP3T-1 UltraMicroPump with SMARTouch Touchscreen Controller are alternate injectors.

WPI has been serving scientists for over 50 years with easy and cost-effective tools for genetic modification. WPI offers a wide range of instruments required for microinjection of zebrafish in oocytes,¹ embryo,² larvae³ and adults⁴ to enable genetic modification.



Direct cardiovascular measurements Embryos, larvae and adult fish

Embryonic zebrafish have become a popular model for cardiovascular research.⁵ WPI is a pioneer in developing instruments for research in electrophysiology and is cited in 1000s of peer-reviewed publications. WPI introduced the **CardioPhys™ Z** series of products that makes measurement of cardiovascular functionalities in zebrafish embryo easy.



CardioPhys™ Z ECG graphical display



The novel WPI CardioPhys[™] Z ECG allows direct measurement of ECG in zebrafish embryos. WPI has optimized its existing electrophysiology product line to meet the demands of the zebrafish researcher.

• Ensures very low noise for recording electrical activity of zebrafish embryonic heart

ECG monitoring using WPI CardioPhys[™] Z ECG. • High resistance to environmental electrical noise

- User-friendly software
- Allows researchers to identify diagnostic indices of cardiovascular physiology such as altered rhythm, signal conduction abnormalities, damage from cardiac events such as ischemia and infarction, etc.

CARDIOPHYS[™] Z BP

The new WPI CardioPhys[™] Z BP is designed to record hydrostatic pressure in very small vessels using a Servo-Null system.⁶ The system has been used to measure blood pressure in the Zebrafish (embryo, larvae and adult fish) with less than 0.5 mmHg resolution.

(Right) Pressure signal from the WPI CardioPhys™ Z BP from the ventricle (top) and bulbus arteriosis (hottom) in a larva



Detection of free radicals & other molecules for disease models



This is a typical laboratory setup of a WPI free radical analyzer with data acquisition system.

The WPI Free Radical Analyzer, TBR4100, enables real-time, highly sensitive detection of free radicals such as NO, H₂O₂, H₂S, CO, O₂-important physiological indicators in intracellular cell signaling and homeostasis. Free radicals beyond the level of normal detoxication can result in oxidative stress (OS).⁷ OS affects wound healing and aging, and it causes several diseases such as diabetes mellitus, neurodegenerative disorders (Parkinson's disease, Alzheimer's disease and Multiple sclerosis), cardiovascular diseases (atherosclerosis and hypertension), respiratory diseases (asthma), cataract development, rheumatoid arthritis and various cancers (colorectal, prostate, breast, lung, bladder cancers).8



application.



The output shows the raw data for an ISO-NOPF200 (NO sensor). Only one of the four channels is used in this