

Automated Tissue Dissociation System: The Singulator™ Platforms

The bench-top Singulator™ system and its single-use cartridges enable reproducible, rapid and hands-off tissue dissociations into single cell or nuclei suspensions. Researchers can now easily obtain suspensions of nuclei or high-viability cells for a wide range of single cell analyses from as little as 2 mg of solid tissues.

The nuclei and single cells isolated with the Singulator™ are ideally suitable for genomics, cell biology and other 'omics applications, including scRNA-Seq, snRNA-Seq, ATAC-Seq, CITE-Seq, FACS, and immuno-oncology. S2 Genomics provides a selection of pre-set protocols and pre-formulated reagents for cell isolations from an expanding choice of mouse, rat, and human tissues, including tumors.

Easy to use. Fast. Reproducible results.



The Singulator™ 100

- Output cells or nuclei
- Compatible with:
Fresh, frozen and OCT embedded tissues
- Temperature control for cold and warm dissociations
- Programmable interface with predefined and user-defined protocols
- Exportable run and system logs



The Singulator™ 200

- Same features as Singulator™ 100
- **In addition:** second cartridge tray to process up to 2 samples in parallel or independently








The Singulator™ 200+

- Same features as Singulator™ 200
- **In addition:** deparaffinizes FFPE samples in as little as 40 minutes with no manual intervention

Comparison of available Cartridges

The single-use cartridges for the Singulator™ enable safe and secure tissue dissociation. Depending on your input sample type and downstream application, the different cartridges are designed to optimize the isolation process for high yields and high viability to be achieved, while eliminating variability.

Cartridge Type					
	Cell Isolation Cartridge	Large Cell Isolation Cartridge	Nuclei Isolation Cartridge	NIC+ Cartridge	FFPE Cartridge
Supported Tissue	Fresh, ideal for cells up to 70 µm in diameter	Fresh, ideal for cells up to 145 µm in diameter	Fresh, Frozen, OCT	Fresh, Frozen, OCT, FFPE	FFPE
Processing Time	20 – 60 min	20 – 60 min	6 – 12 min	6 – 12 min	40 – 80 min
Supported Input	20 – 300 mg	20 – 300 mg	20 – 300 mg	2 – 300 mg	2 x 50 µm curls
Colour	white	red	blue	yellow	green

Demonstrated Tissue Types

These tissue types were isolated in customer labs and in-house with the Singulator™ platform:

Human	Aorta, Brain (adult, infant fetal), Bladder, Breast (normal, tumor), Cartilage, Cervical Tissue, Colon (normal, polyp, tumor), Dura, Glioblastoma, Heart (adult fetal), Hemangioma, Hepatoblastoma, Intestine (adult fetal), Kidney, Lung (fetal, adult, tumor), Melanoma, Meniscus, Muscle (TA, SA), Neck Tumor, Organoids (retinal, cerebral), Pancreas, PBMC, Post Mortem Brain, Prostate (normal, tumor), Retinal Organoids (WT, gene knockout), Skin, Spleen (fetal), Synovium and Infrapatellar Fat Pad, Thymus (fetal), Urethra, Vascular Abnormality (arterial, lymphatic)
Mouse	Adipose, Adrenal Gland, Brain, Colon (PDX tumor), DRG, Glioblastoma, Gonads, Heart, Intestine, IVD, Kidney, Liver, Lung, Lymph Node, Meniscus, Muscle, Olfactory Epithelium, Ovary, Pancreas, Pancreatic Tumor, Post Mortem Brain, Salivary Glands, Skin, Spinal Cord, Spleen, Testes
Rat	Brain, Kidney, Liver, Lung, Spleen
Spiny Mouse (<i>A. carinis</i>)	Kidney
Pig	Colon, Brain
Cow	Heart, Colon, Brain
Chicken	Thymus, Liver
<i>Xenopus</i>	Liver, Kidney, Thymus
Fish	Brain, Whole
Zebrafish	Retina, Brain, Liver
Planaria	Whole
Honeybee (<i>A. mellifera</i>)	Thorax, Whole Bee
<i>Drosophila</i>	Brain, Larvae, Ovary
<i>A. Thaliana</i>	Whole Seedling, Leaves
<i>Sorghum Purpureosericeum</i>	Embryos
Tobacco	Leaves

For more information, please visit our website www.dunnlab.de

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