

# Package ‘SpatialDatasets’

November 13, 2025

**Version** 1.8.0

**Title** Collection of spatial omics datasets

**Description** This is a collection of publically available spatial omics datasets. Where possible we have curated these datasets as either SpatialExperiments, MoleculeExperiments or CytoImageLists and included annotations of the sample characteristics.

**URL** <https://github.com/SydneyBioX/SpatialDatasets>

**BugReports** <https://github.com/SydneyBioX/SpatialDatasets/issues>

**License** GPL-3

**Encoding** UTF-8

**biocViews** ExperimentData, ExperimentHub, ReproducibleResearch, SingleCellData, SpatialData, Homo\_sapiens\_Data, Mus\_musculus\_Data

**Depends** ExperimentHub, SpatialExperiment,

**Imports** utils

**VignetteBuilder** knitr

**Suggests** BiocStyle, knitr, rmarkdown, cytomapper

**RoxygenNote** 7.3.2

**git\_url** <https://git.bioconductor.org/packages/SpatialDatasets>

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SpatialDatasets	<i>A collection of publically available spatial omics datasets.</i>
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### Description

This is a collection of publically available spatial omics datasets. Where possible we have curated these datasets as either SpatialExperiments, MoleculeExperiments or CytoImageLists and included annotations of the sample characteristics.

### Details

The SpatialDatasets package contains a collection of spatially-resolved omics datasets for use in examples, demonstrations, and tutorials.

The datasets are from several different platforms including IMC, MIBI-TOF, CODEX, Xenium, CosMx and MERFISH. They have been sourced from various publicly available sources.

Additional examples and documentation are provided in the package vignette.

#### Datasets

The SpatialDatasets package contains the following datasets:

- spe\_Keren\_2018 (MIBI-TOF): A study on triple negative breast cancer containing 40 samples measured using MIBI-TOF published by [Keren et al. (2018)](<https://doi.org/10.1016/j.cell.2018.08.039>).
- Ferguson\_Images (IMC): A study on head and neck cutaneous squamous cell carcinoma containing 44 samples measured using IMC published by [Ferguson et al. (2022)](<https://doi.org/10.1158/1078-0432.CCR-22-1332>).
- spe\_Ferguson\_2022 (IMC): A study on head and neck cutaneous squamous cell carcinoma containing 44 samples measured using IMC published by [Ferguson et al. (2022)](<https://doi.org/10.1158/1078-0432.CCR-22-1332>).
- spe\_Schurch\_2020 (CODEX): A study on advanced colorectal cancer containing 140 samples measured using CODEX published by [Schurch et al. (2020)](<https://doi.org/10.1016/j.cell.2020.07.005>).
- spe\_Ali\_2020 (IMC): A study on breast cancer containing 483 samples measured using IMC published by [Ali et al. (2020)](<https://doi.org/10.1038/s43018-020-0026-6>).
- spe\_Amancherla\_2025 (Xenium): A study on heart transplant rejection containing 62 (49 adult and 13 pediatric) samples measured with Xenium published by [Amancherla et al. (2025)](<https://doi.org/10.1101/2025.02.28.640852>).
- spe\_Vannan\_2025 (Xenium): A study on pulmonary fibrosis containing 35 lung samples measured with Xenium published by [Vannan et al. (2025)](<https://doi.org/10.1038/s41588-025-02080-x>).

The datasets will be a SpatialExperiment or MoleculeExperiment.

```
# load using dataset name spe <- spe_Keren_2018() spe
```

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