

Welcome to nano-org

This website aims to deliver a publicly accessible, curated, and functional resource containing single-molecule localisation microscopy (SMLM) data representing the nanoscale distributions of proteins in cells. Nano-org was developed by the [Research Software Group](#) for a research project led by [Professor Dylan Owen](#), within the [Institute of Immunology and Immunotherapy](#) at the University of Birmingham.

Please [register](#) to create an account or [contact us](#) with any questions.

Welcome to nano-org

This guide demonstrates how to navigate the nano-org site, including steps to view and upload data

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Viewing data

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Public Database

Show

10

 entries

Search:

Title	↕	Modality	↕	Localization Software	↕	Fluorophore	↕	Protein	↕	Cell Type	↕	Upload Date	↕
actin_control_IRIS647		PAINT		ThunderSTORM		atto 647N		actin		Jurkat E6.1		20/08/2024 14:25:16	
LAT_late_synapse_mEos2_periphery		PALM		ThunderSTORM		mEos2		LAT		Jurkat E6.1		20/08/2024 14:23:05	
LAT_late_synapse_mEos2_centre		PALM		ThunderSTORM		mEos2		LAT		Jurkat E6.1		20/08/2024 14:22:01	
actin_late_synapse_IRIS647_periphery		PAINT		ThunderSTORM		atto 647N		actin		Jurkat E6.1		20/08/2024 14:19:54	
actin_late_synapse_IRIS647_centre		PAINT		ThunderSTORM		atto 647N		actin		Jurkat E6.1		20/08/2024 14:17:30	
actin_late_synapse_alpha_actin_KO_Phal647_peripher		dSTORM		ThunderSTORM		phalloidin-647		actin		Jurkat E6.1		20/08/2024 14:15:34	
actin_late_synapse_alpha_actin_KO_Phal647_centre		dSTORM		ThunderSTORM		phalloidin-647		actin		Jurkat E6.1		20/08/2024 14:13:26	
actin_early_synapse_IRIS647_periphery		PAINT		ThunderSTORM		atto 647N		actin		Jurkat E6.1		20/08/2024 14:10:36	
Actin_early_synapse_IRIS647_centre		PAINT		ThunderSTORM		atto 647N		actin		Jurkat E6.1		20/08/2024 14:01:55	
PrimaryCD8_TIGIT		dSTORM		ThunderSTORM		alexafluor-647		TIGIT		Primary CD8+		20/08/2024 13:54:11	

Showing 1 to 10 of 31 entries

Public Database

Show 10 entries

Search for specific dataset
or metadata tag

Search:

Title	Modality	Localization Software	Fluorophore	Protein	Cell Type	Upload Date
actin_control_IRIS647	PAINT	ThunderSTORM	atto 647N	actin	Jurkat E6.1	20/08/2024 14:25:16
LAT_late_synapse_mEos2_periphery	PALM	ThunderSTORM	mEos2	LAT	Jurkat E6.1	20/08/2024 14:23:05
LAT_late_synapse_mEos2_centre	PALM	ThunderSTORM	mEos2	LAT	Jurkat E6.1	20/08/2024 14:22:01
actin_late_synapse_IRIS647_periphery	PAINT	ThunderSTORM	atto 647N	actin	Jurkat E6.1	20/08/2024 14:19:54
actin_late_synapse_IRIS647_centre	PAINT	ThunderSTORM	atto 647N	actin	Jurkat E6.1	20/08/2024 14:17:30
actin_late_synapse_alpha_actin_KO_Phal647_peripher	dSTORM	ThunderSTORM	phalloidin-647	actin	Jurkat E6.1	20/08/2024 14:15:34
actin_late_synapse_alpha_actin_KO_Phal647_centre	dSTORM	ThunderSTORM	phalloidin-647	actin	Jurkat E6.1	20/08/2024 14:13:26
actin_early_synapse_IRIS647_periphery	PAINT	ThunderSTORM	atto 647N	actin	Jurkat E6.1	20/08/2024 14:10:36
Actin_early_synapse_IRIS647_centre	PAINT	ThunderSTORM	atto 647N	actin	Jurkat E6.1	20/08/2024 14:01:55
PrimaryCD8_TIGIT	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	Primary CD8+	20/08/2024 13:54:11

Showing 1 to 10 of 31 entries

Previous

1

2

3

4

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Public Database

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Sort data by their metadata

Search:

Title	↕ Modality ↕	↕ Localization Software ↕	↕ Fluorophore ↕	↕ Protein ↕	↕ Cell Type ↕	↕ Upload Date ↕
actin_control_IRIS647	PAINT	ThunderSTORM	atto 647N	actin	Jurkat E6.1	20/08/2024 14:25:16
LAT_late_synapse_mEos2_periphery	PALM	ThunderSTORM	mEos2	LAT	Jurkat E6.1	20/08/2024 14:23:05
LAT_late_synapse_mEos2_centre	PALM	ThunderSTORM	mEos2	LAT	Jurkat E6.1	20/08/2024 14:22:01
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actin_late_synapse_alpha_actin_KO_Phal647_centre	dSTORM	ThunderSTORM	phalloidin-647	actin	Jurkat E6.1	20/08/2024 14:13:26
actin_early_synapse_IRIS647_periphery	PAINT	ThunderSTORM	atto 647N	actin	Jurkat E6.1	20/08/2024 14:10:36
Actin_early_synapse_IRIS647_centre	PAINT	ThunderSTORM	atto 647N	actin	Jurkat E6.1	20/08/2024 14:01:55
PrimaryCD8_TIGIT	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	Primary CD8+	20/08/2024 13:54:11

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Title	↕	Modality	↕	Localization Software	↕	Fluorophore	↕	Protein	↕	Cell Type	↕	Upload Date	↕
actin_control_IRIS647		PAINT		ThunderSTORM		atto 647N		actin		Jurkat E6.1		20/08/2024 14:25:16	
LAT_late_synapse_mEos2_periphery		PALM		ThunderSTORM		mEos2		LAT		Jurkat E6.1		20/08/2024 14:23:05	
LAT_late_synapse_mEos2_centre		PALM		ThunderSTORM		mEos2		LAT		Jurkat E6.1		20/08/2024 14:22:01	
actin_late_synapse_IRIS647_periphery		PAINT		ThunderSTORM		atto 647N		actin		Jurkat E6.1		20/08/2024 14:19:54	
actin_late_synapse_IRIS647_centre		PAINT		ThunderSTORM		atto 647N		actin		Jurkat E6.1		20/08/2024 14:17:30	
actin_late_synapse_alpha_actin_KO_Phal647_peripher		dSTORM		ThunderSTORM		phalloidin-647		actin		Jurkat E6.1		20/08/2024 14:15:34	
actin_late_synapse_alpha_actin_KO_Phal647_centre		dSTORM		ThunderSTORM		phalloidin-647		actin		Jurkat E6.1		20/08/2024 14:13:26	
actin_early_synapse_IRIS647_periphery		PAINT		ThunderSTORM		atto 647N		actin		Jurkat E6.1		20/08/2024 14:10:36	
Actin_early_synapse_IRIS647_centre		PAINT		ThunderSTORM		atto 647N		actin		Jurkat E6.1		20/08/2024 14:01:55	
PrimaryCD8_TIGIT		dSTORM		ThunderSTORM		alexafluor-647		TIGIT		Primary CD8+		20/08/2024 13:54:11	

Showing 1 to 10 of 31 entries

Example

Dataset Details

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Title	PrimaryCD8_TIGIT
Modality	dSTORM
Primary Antibody	
Primary Antibody Catalog Number	
Secondary Antibody	
Secondary Antibody Catalog Number	
Localization Software	ThunderSTORM
Fluorophore	alexafluor-647
Protein	TIGIT
UniProt Protein ID	
Cell Type	Primary CD8+
Primary Cell Line	False
Cell Line Company	
Cell Line Number	
DOI	
Drift Corrected	True
Blink Corrected	True

Dataset details including
all metadata provided by
user during upload

Data Files

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Search:

File	Display	Density (detections per μm^2)	Coverage (μm^2)	ROIs	Delete File
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_003_-_GSD003_merge.csv	View	445.7...	54.0	Download	Delete
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_005_-_GSD003_merge.csv	View	52.51...	99.0	Download	Delete
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_007_-_GSD003_merge.csv	View	239.3...	9.0	Download	Delete
041220_D2_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_002_-_GSD003_merge.csv	View	67.55...	9.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_001_-_GSD004_merge.csv	View	474.4...	27.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_003_-_GSD004_merge.csv	View	1103....	9.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_007_-_GSD004_merge.csv	View	505.7...	18.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_009_-_GSD003_merge.csv	View	442.9...	36.0	Download	Delete

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Options to view or download dataset

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Click link to download individual localization files

Search:

File	Display	Density (detections per μm^2)	Coverage (μm^2)	ROIs	Delete File
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_003_-GSD003_merge.csv	View	445.7...	54.0	Download	Delete
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_005_-GSD003_merge.csv	View	52.51...	99.0	Download	Delete
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_007_-GSD003_merge.csv	View	239.3...	9.0	Download	Delete
041220_D2_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_002_-GSD003_merge.csv	View	67.55...	9.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_001_-GSD004_merge.csv	View	474.4...	27.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_003_-GSD004_merge.csv	View	1103....	9.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_007_-GSD004_merge.csv	View	505.7...	18.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_009_-GSD003_merge.csv	View	442.9...	36.0	Download	Delete

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041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_007_-_GSD003_merge.csv	View	239.3...	9.0	Download	Delete
041220_D2_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_002_-_GSD003_merge.csv	View	67.55...	9.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_001_-_GSD004_merge.csv	View	474.4...	27.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_003_-_GSD004_merge.csv	View	1103....	9.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_007_-_GSD004_merge.csv	View	505.7...	18.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_009_-_GSD003_merge.csv	View	442.9...	36.0	Download	Delete

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Download ROI (if applicable) for individual localization file – ROI files contain the xy coordinates for the cell-bounding polygon

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File	Display	Density (detections per μm^2)	Coverage (μm^2)	ROIs	Delete File
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_003_-_GSD003_merge.csv	View	445.7...	54.0	Download	Delete
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_005_-_GSD003_merge.csv	View	52.51...	99.0	Download	Delete
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_007_-_GSD003_merge.csv	View	239.3...	9.0	Download	Delete
041220_D2_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_002_-_GSD003_merge.csv	View	67.55...	9.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_001_-_GSD004_merge.csv	View	474.4...	27.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_003_-_GSD004_merge.csv	View	1103....	9.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_007_-_GSD004_merge.csv	View	505.7...	18.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_009_-_GSD003_merge.csv	View	442.9...	36.0	Download	Delete

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Information provided about localization density and cell size for each localization file

Data Files

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View localization data

Search:

File	Display	Density (detections per μm^2)	Coverage (μm^2)	ROIs	Delete File
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_003_-_GSD003_merge.csv	View	445.7...	54.0	Download	Delete
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_005_-_GSD003_merge.csv	View	52.51...	99.0	Download	Delete
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_007_-_GSD003_merge.csv	View	239.3...	9.0	Download	Delete
041220_D2_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_002_-_GSD003_merge.csv	View	67.55...	9.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_001_-_GSD004_merge.csv	View	474.4...	27.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_003_-_GSD004_merge.csv	View	1103....	9.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_007_-_GSD004_merge.csv	View	505.7...	18.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_009_-_GSD003_merge.csv	View	442.9...	36.0	Download	Delete

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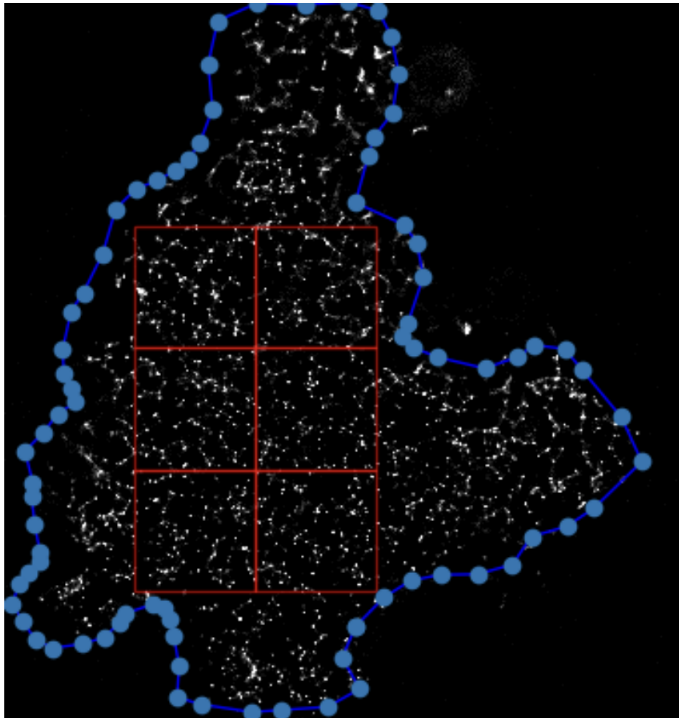
Download search results

Uploaded File Display

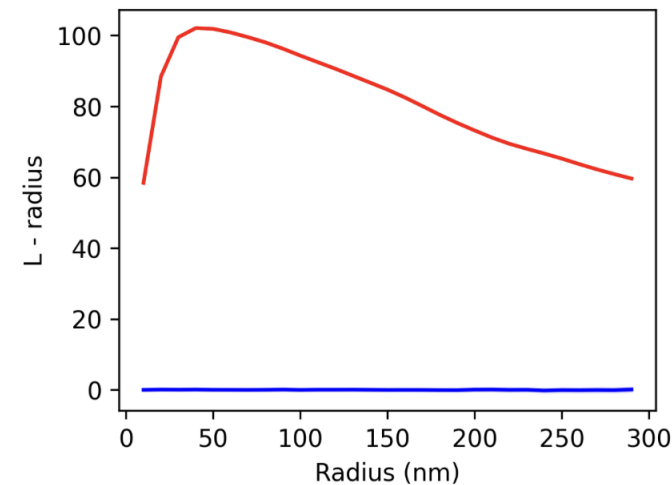
Filename 041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_003_-_GSD003_merge.csv

Dataset [PrimaryCD8_TIGIT](#)

This is a low resolution overview of the data file. Where applicable, the blue polygon shows the first ROI and the red grid shows how this ROI has been divided into sub-regions.



Plot shows deviation of Ripley L function from the radius (red) alongside the simulated distribution for complete spatial randomness with a 95% confidence interval (blue).



Ripley L function for the localization file

Visualisation of localization file including ROI and locations of 3x3 μm gridded squares

Data Files

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Show 10 entries

File	Display	Density (detections per μm^2)	Coverage (μm^2)	ROIs	Delete File
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_003_-_GSD003_merge.csv	View	445.7...	54.0	Download	Delete
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_005_-_GSD003_merge.csv	View	52.51...	99.0	Download	Delete
041220_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_007_-_GSD003_merge.csv	View	239.3...	9.0	Download	Delete
041220_D2_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_002_-_GSD003_merge.csv	View	67.55...	9.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_001_-_GSD004_merge.csv	View	474.4...	27.0	Download	Delete
041220_D3_CD8_Phalloidin-488_TIGIT-AF647_0_mol_CD155_003_-_GSD004_merge.csv	View	1103....	9.0	Download	Delete
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Showing 1 to 8 of 8 entries

Similarity Search Results

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Alternatively, option to download localization files of 3x3 μm gridded squares for entire dataset

Similarity Search Results

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Filter Results:

☐ Modality ☐ Localization Software ☐ Fluorophore ☐ Protein ☐ Cell Type

Show 10 entries

Search:

Dataset	Dissimilarity Score (mean) ↑↓	Dissimilarity Score (std)	Dissimilarity Score (thinned) (mean) ↑↓	Dissimilarity Score (thinned) (std)	modality	Localization Software	Fluorophore	Protein	Cell Type
Jurkat_TIGIT	0.925...	0.528...	1.308...	0.400...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	Jurkat E6.1
NK_TIGIT	1.499...	0.803...	1.017...	0.440...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	NK
LAT_late_synapse_mEos2_periphery	1.841...	1.014...	0.686...	0.299...	PALM	ThunderSTORM	mEos2	LAT	Jurkat E6.1
SPL76 mEos3.3 Jurkat on Poly-L-Lysine 5mins	1.866...	1.002...	0.618...	0.479...	PALM		mEos3.3	SLP76	Jurkat E6.1
PrimaryCD4_TIGIT	1.900...	0.946...	1.209...	0.585...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	Primary CD4+
LAT_late_synapse_mEos2_centre	1.990...	0.877...	0.452...	0.278...	PALM	ThunderSTORM	mEos2	LAT	Jurkat E6.1
SPL76 mEos3.3 Jurkat on anti-CD90	2.161...	0.981...	0.344...	0.215...	PALM		mEos3.3	SLP76	Jurkat

Similarity between dataset and all other datasets made publicly available is calculated

Similarity Search Results

Download search results

Results can be downloaded

Filter Results:

Modality Localization Software Fluorophore Protein Cell Type

Show 10 entries

Search:

Dataset	Dissimilarity Score (mean) ↑↓	Dissimilarity Score (std)	Dissimilarity Score (thinned) (mean) ↑↓	Dissimilarity Score (thinned) (std)	modality	Localization Software	Fluorophore	Protein	Cell Type
Jurkat_TIGIT	0.925...	0.528...	1.308...	0.400...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	Jurkat E6.1
NK_TIGIT	1.499...	0.803...	1.017...	0.440...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	NK
LAT_late_synapse_mEos2_periphery	1.841...	1.014...	0.686...	0.299...	PALM	ThunderSTORM	mEos2	LAT	Jurkat E6.1
SPL76 mEos3.3 Jurkat on Poly-L-Lysine 5mins	1.866...	1.002...	0.618...	0.479...	PALM		mEos3.3	SLP76	Jurkat E6.1
PrimaryCD4_TIGIT	1.900...	0.946...	1.209...	0.585...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	Primary CD4+
LAT_late_synapse_mEos2_centre	1.990...	0.877...	0.452...	0.278...	PALM	ThunderSTORM	mEos2	LAT	Jurkat E6.1
SPL76 mEos3.3 Jurkat on anti-CD90	2.161...	0.981...	0.344...	0.215...	PALM		mEos3.3	SLP76	Jurkat

Similarity Search Results

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Filter Results:

☐ Modality

☐ Localization Software

☐ Fluorophore

☒ Protein

☐ Cell Type

Show 10 entries

Search:

Dataset	Dissimilarity Score (mean)	↑↓ Dissimilarity Score (std)	Dissimilarity Score (thinned) (mean)	↑↓ Dissimilarity Score (thinned) (std)	modality	Localization Software	Fluorophore	Protein	Cell Type
Jurkat_TIGIT	0.925...	0.528...	1.308...	0.400...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	Jurkat E6.1
NK_TIGIT	1.499...	0.803...	1.017...	0.440...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	NK
PrimaryCD4_TIGIT	1.900...	0.946...	1.209...	0.585...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	Primary CD4+

Showing 1 to 3 of 3 entries

Similarity Search Results

Mean dissimilarity scores and standard deviation are provided – larger dissimilarity scores indicate larger dissimilarity between datasets

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☐ Localization Software

☐ Fluorophore

☒ Protein

☐ Cell Type

Show10entries

Search:

Dataset	Dissimilarity Score (mean)	Dissimilarity Score (std)	Dissimilarity Score (thinned) (mean)	Dissimilarity Score (thinned) (std)	modality	Localization Software	Fluorophore	Protein	Cell Type
Jurkat_TIGIT	0.925...	0.528...	1.308...	0.400...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	Jurkat E6.1
NK_TIGIT	1.499...	0.803...	1.017...	0.440...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	NK
PrimaryCD4_TIGIT	1.900...	0.946...	1.209...	0.585...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	Primary CD4+

Showing 1 to 3 of 3 entries

Similarity Search Results

Dissimilarity scores of thinned data (30 localizations/ μm^2) are provided for users who want dissimilarity scores to be independent of localization density

[Download search results](#)

Filter Results:

☐ Modality ☐ Localization Software ☐ Fluorophore ☒ Protein ☐ Cell Type

Show 10 entries

Search:

Dataset	Dissimilarity Score (mean)	↑↓ Dissimilarity Score (std)	Dissimilarity Score (thinned) (mean)	↑↓ Dissimilarity Score (thinned) (std)	modality	Localization Software	Fluorophore	Protein	Cell Type
Jurkat_TIGIT	0.925...	0.528...	1.308...	0.400...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	Jurkat E6.1
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PrimaryCD4_TIGIT	1.900...	0.946...	1.209...	0.585...	dSTORM	ThunderSTORM	alexafluor-647	TIGIT	Primary CD4+

Showing 1 to 3 of 3 entries

Welcome to nano-org

This website aims to deliver a publicly accessible, curated, and functional resource containing single-molecule localisation microscopy (SMLM) data representing the nanoscale distributions of proteins in cells. Nano-org was developed by the [Research Software Group](#) for a research project led by [Professor Dylan Owen](#), within the [Institute of Immunology and Immunotherapy](#) at the [University of Birmingham](#).

Uploading data

Please [register](#) to create an account or [contact us](#) with any questions.

Welcome to nano-org

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Please register to create an account or contact us with any questions.

Upload Data

Data uploaded to the nano-org website will be made available under the [CC-BY-4.0 license](#). Please see the [User Agreement](#) for further conditions.

Title*

Modality*

Localization software*

Fluorophore*

Protein*

Protein id

UniProt protein ID.

Cell type*

Cell line name.

☐ Cell primary

Is this a primary cell line.

Give the uploaded data a unique title:
*E.g. SPL76 mEos3.3 Jurkat on aCD3aCD28
5mins*

Upload Data

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Title*

Modality*

✓ -----

PALM

dSTORM

PAINT

Other

Fluorophore*

Protein*

Protein id

UniProt protein ID.

Cell type*

Cell line name.

☐ Cell primary

Is this a primary cell line.

Modality
Select the appropriate
modality

Upload Data

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Title*

Modality*

Primary antibody *

Primary antibody number *

Primary antibody catalog number.

Secondary antibody

Secondary antibody number

Secondary antibody catalog number.

Localization software*

Fluorophore*

dSTORM data

If uploading dSTORM data upload the primary antibody used as well as the secondary antibody (if applicable) along with their antibody numbers

Upload Data

Data uploaded to the nano-org website will be made available under the [CC-BY-4.0 license](#). Please see the [User Agreement](#) for further conditions.

Title*

Modality*

Localization software*

✓ -----

ThunderSTORM

SMAP

Picasso

DECODE

RapidSTORM

other

Protein id

UniProt protein ID.

Cell type*

Cell line name.

☐ Cell primary

Is this a primary cell line.

Localization software
Select the localization
software used to
process your results

Localization software*

Fluorophore*

Protein*

Protein id

UniProt protein ID.

Cell type*

Cell line name.

☐ Cell primary

Is this a primary cell line.

Cell company

Cell source company name.

Cell number

Cell catalog number.

Experimental metadata

Input the fluorophore, protein and UniProt protein ID (if available), long with cell type and other relevant experimental details

Cell number

Cell catalog number.

Experimental notes

Provide any additional experimental notes (e.g. drug treatments, timepoint experiment details etc.)

DOI

DOI for associated publication or dataset.

☐ Drift corrected☐ Blink corrected

Effective pixel size (nm)*

Files*

Choose Files no files selected

Please select your detection data files and optionally polygon regions of interest (ROIs) - both should be .csv format. Detection files can

Cell number

Cell catalog number.

Experimental notes

DOI

DOI for associated publication or dataset.

☐ Drift corrected☐ Blink corrected

Effective pixel size (nm)*

Files*

Choose Files

no files selected

Please select your detection data files and optionally polygon regions of interest (ROIs) - both should be .csv format. Detection files can

Provide a DOI if the
data is linked to a
publication

Cell number

Cell catalog number.

Experimental notes

DOI

DOI for associated publication or dataset.

☐ Drift corrected☐ Blink corrected

Effective pixel size (nm)*

Files*

Choose Files

no files selected

Please select your detection data files and optionally polygon regions of interest (ROIs) - both should be .csv format. Detection files can

Tick whether the
samples have been
Drift corrected and/or
Blink corrected

Cell number

Cell catalog number.

Experimental notes

DOI

DOI for associated publication or dataset.

☐ Drift corrected

☐ Blink corrected

Effective pixel size (nm)*

Files*

Choose Filesno files selected

Please select your detection data files and optionally polygon regions of interest (ROIs) - both should be .csv format. Detection files can

State the pixel size for
the images, for
example, 100nm

Files*

Choose Files

no files selected

Please select your detection data files and optionally polygon regions of interest (ROIs) - both should be .csv format. Detection files can be produced with either [ThunderSTORM](#) or [SMAP](#). Each (optional) ROI file contains the xy coordinates for the vertices of a single polygon which can be produced using Fiji/ThunderSTORM. ROI files should be named {DETECTION_FILE_NAME}"_ROI*.csv". For example "experiment_ROI_1.csv" and "experiment_ROI_2.csv" define two polygon ROIs for detection file "experiment.csv".

☐ Private upload

Select to restrict access to yourself.

Share with

ahmedma
afraz
lewiscz
dnieves

Leave blank to upload to public database.

Upload

Upload detection data files and optionally polygon regions of interest (ROIs) - both should be .csv format. ROI files should be named {DETECTION_FILE_NAME}"_ROI*.csv". For example "experiment_ROI_1.csv" and "experiment_ROI_2.csv" define two polygon ROIs for detection file "experiment.csv".

Files*

Choose Files

no files selected

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Share with

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lewiscz
dnieves

Leave blank to upload to public database.

Upload

Choose whether to restrict data access to yourself (tick 'Private upload'), to other specific users (click user names under 'Share with') or to the public (click neither of the other options)

Files*

Choose Files

no files selected

Please select your detection data files and optionally polygon regions of interest (ROIs) - both should be .csv format. Detection files can be produced with either [ThunderSTORM](#) or [SMAP](#). Each (optional) ROI file contains the xy coordinates for the vertices of a single polygon which can be produced using Fiji/ThunderSTORM. ROI files should be named {DETECTION_FILE_NAME}_ROI*.csv". For example "experiment_ROI_1.csv" and "experiment_ROI_2.csv" define two polygon ROIs for detection file "experiment.csv".

☐

Private upload

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lewiscz
dnieves

Leave blank to upload to public database.

Upload

Click Upload when
finished

Files*

Choose Files

no files selected

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Share with

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dnieves

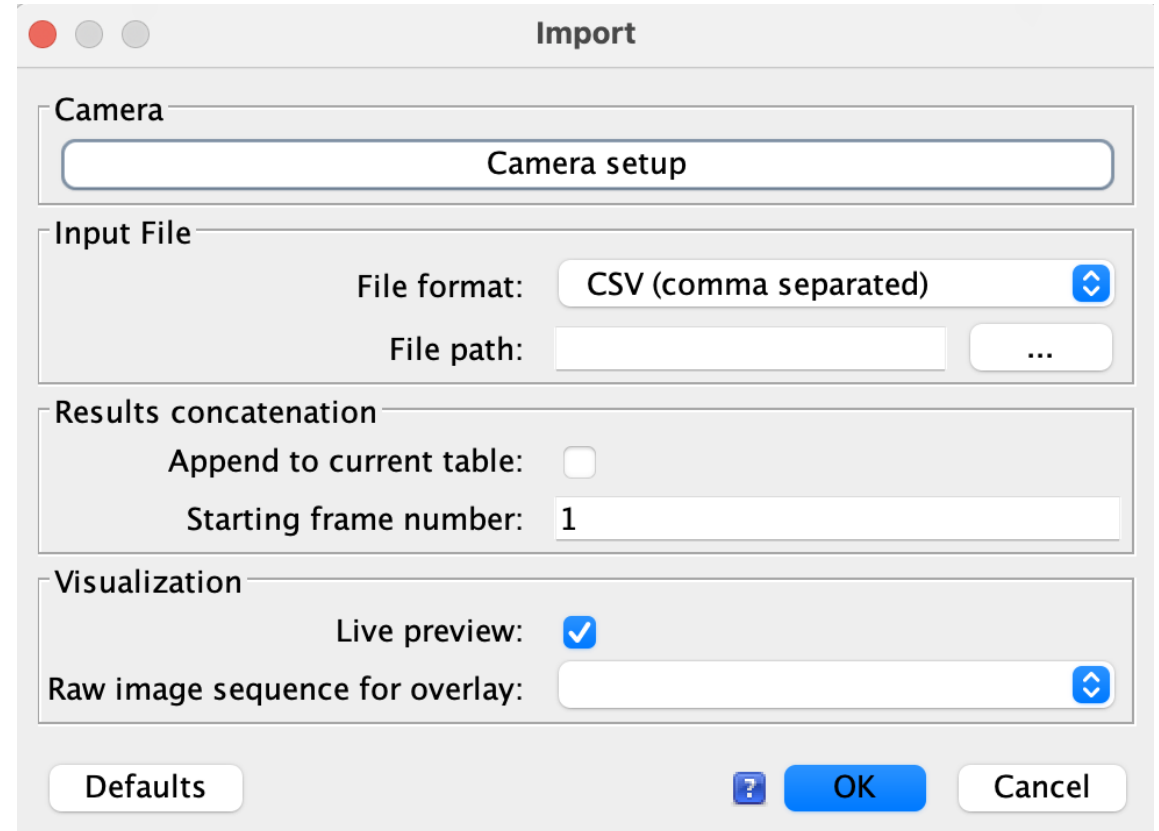
Leave blank to upload to public database.

Upload

Creating a polygon region in Fiji

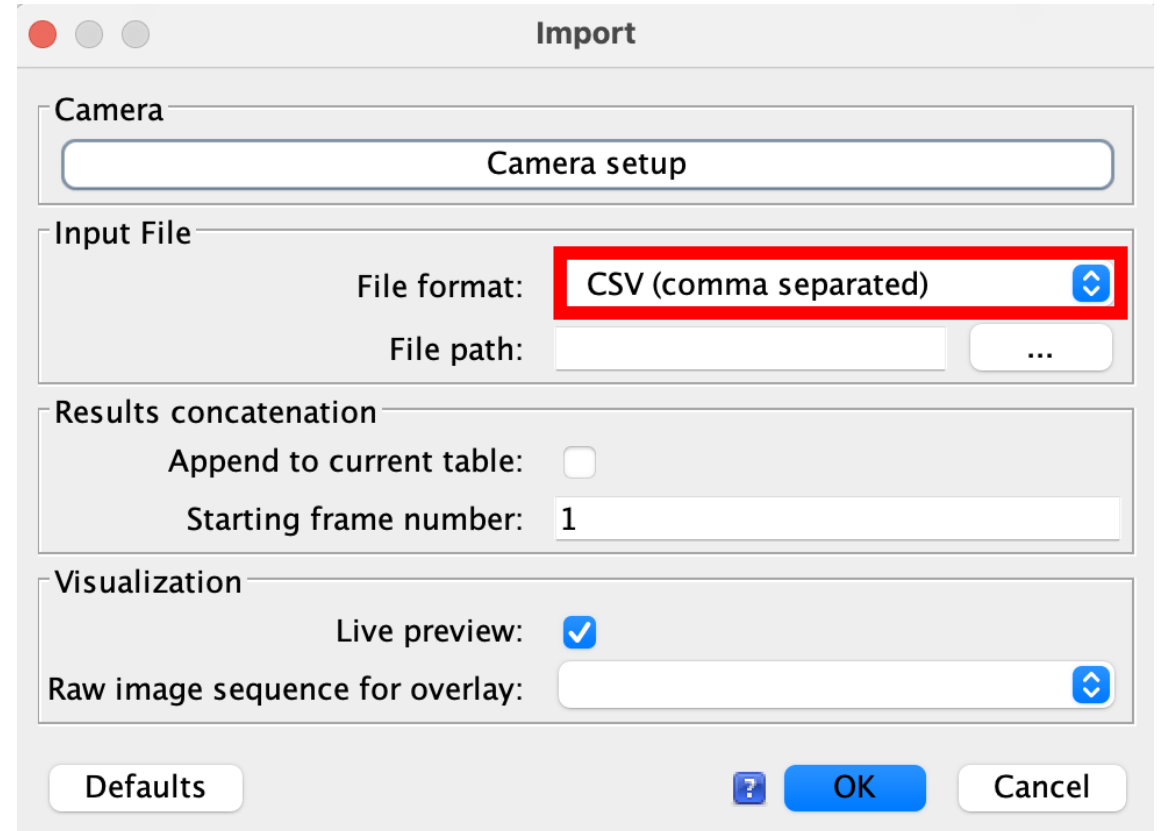
Creating a polygon region in Fiji

- Click:
 - Plugins -> ThunderSTORM -> Import/Export ->
 - Import results



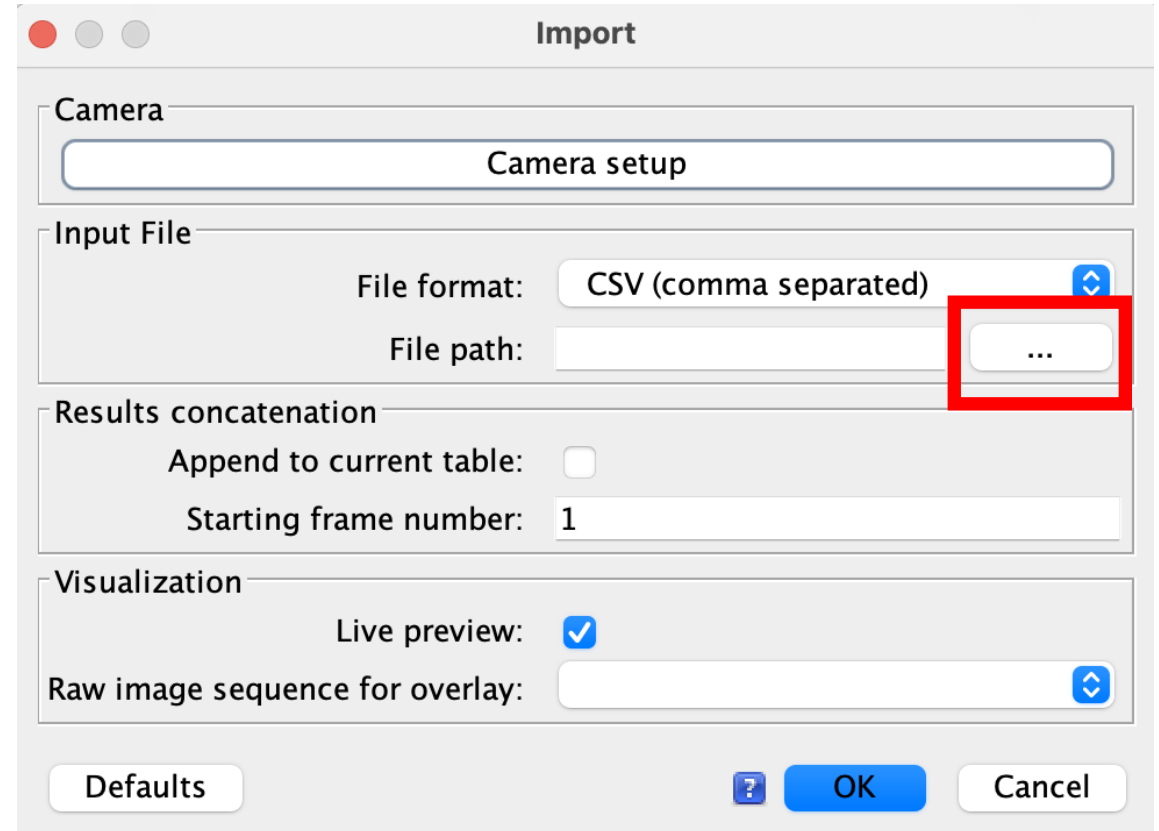
Creating a polygon region in Fiji

Make sure file format
is CSV



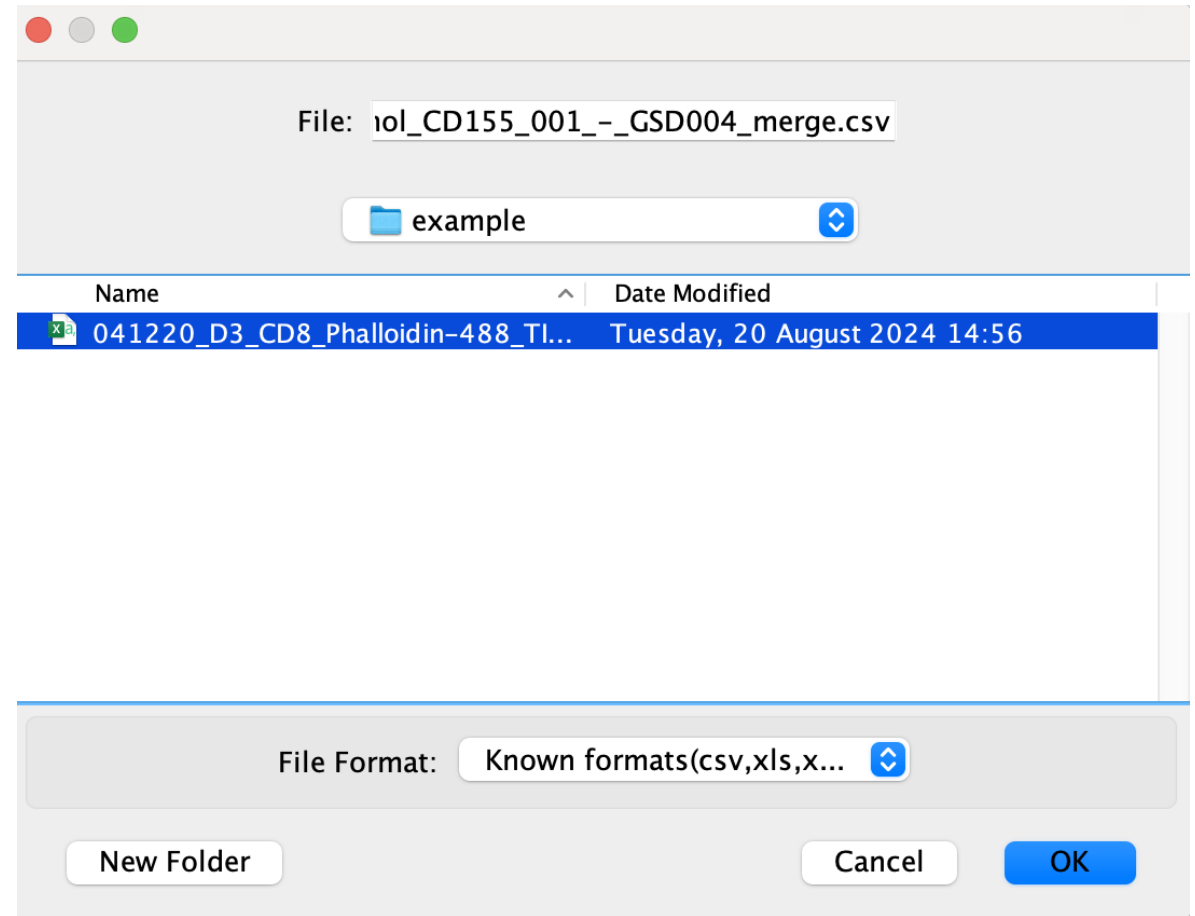
Creating a polygon region in Fiji

Click here to navigate
to the file path
containing your
detection file



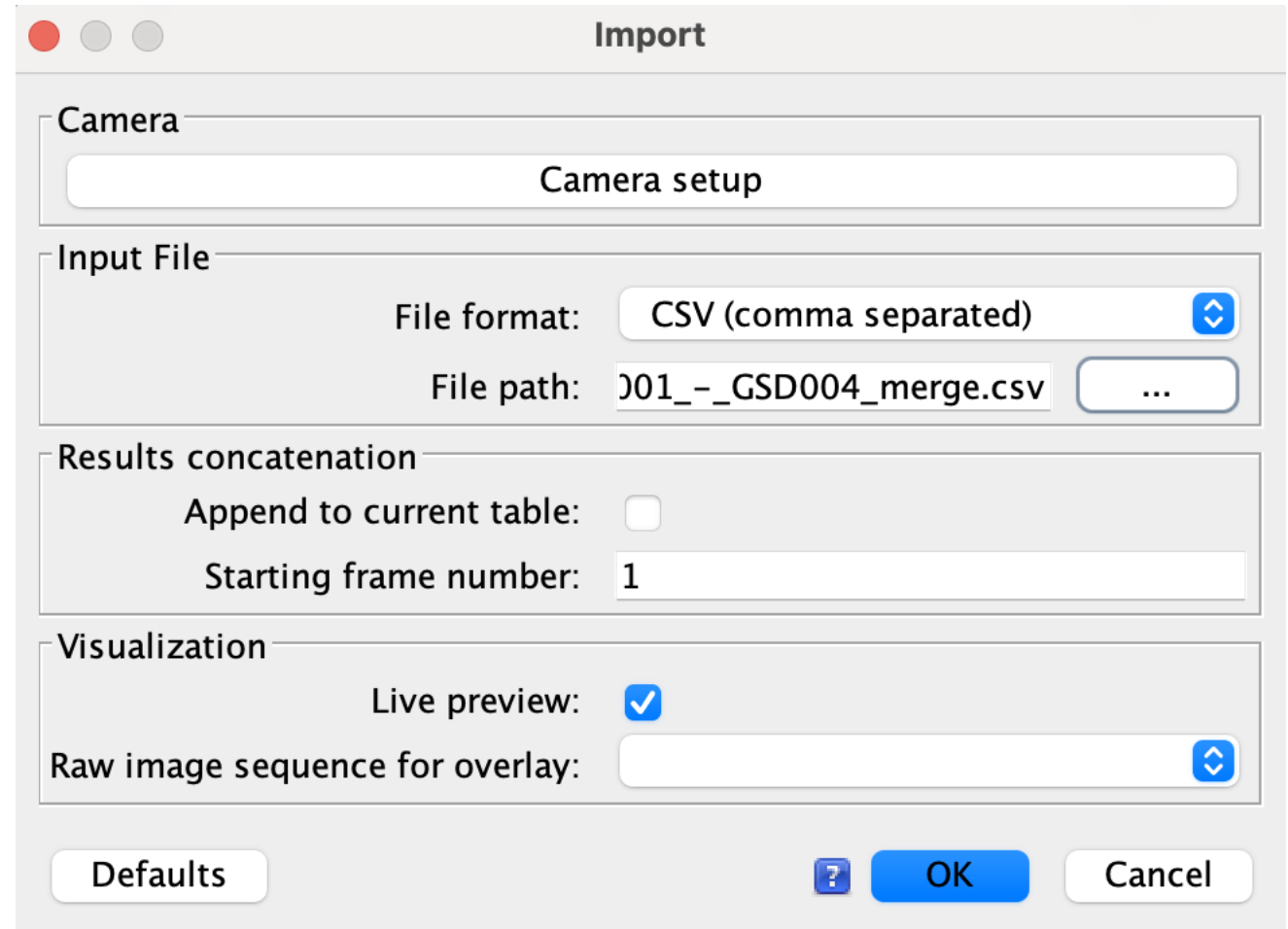
Creating a polygon region in Fiji

Navigate to CSV
detection file and
click "ok"



Creating a polygon region in Fiji

You will be brought
back to this menu -
click “ok”



The screenshot shows the 'Import' dialog box in Fiji software. It has a title bar with standard macOS window controls (red, yellow, and green buttons). The dialog is divided into several sections:

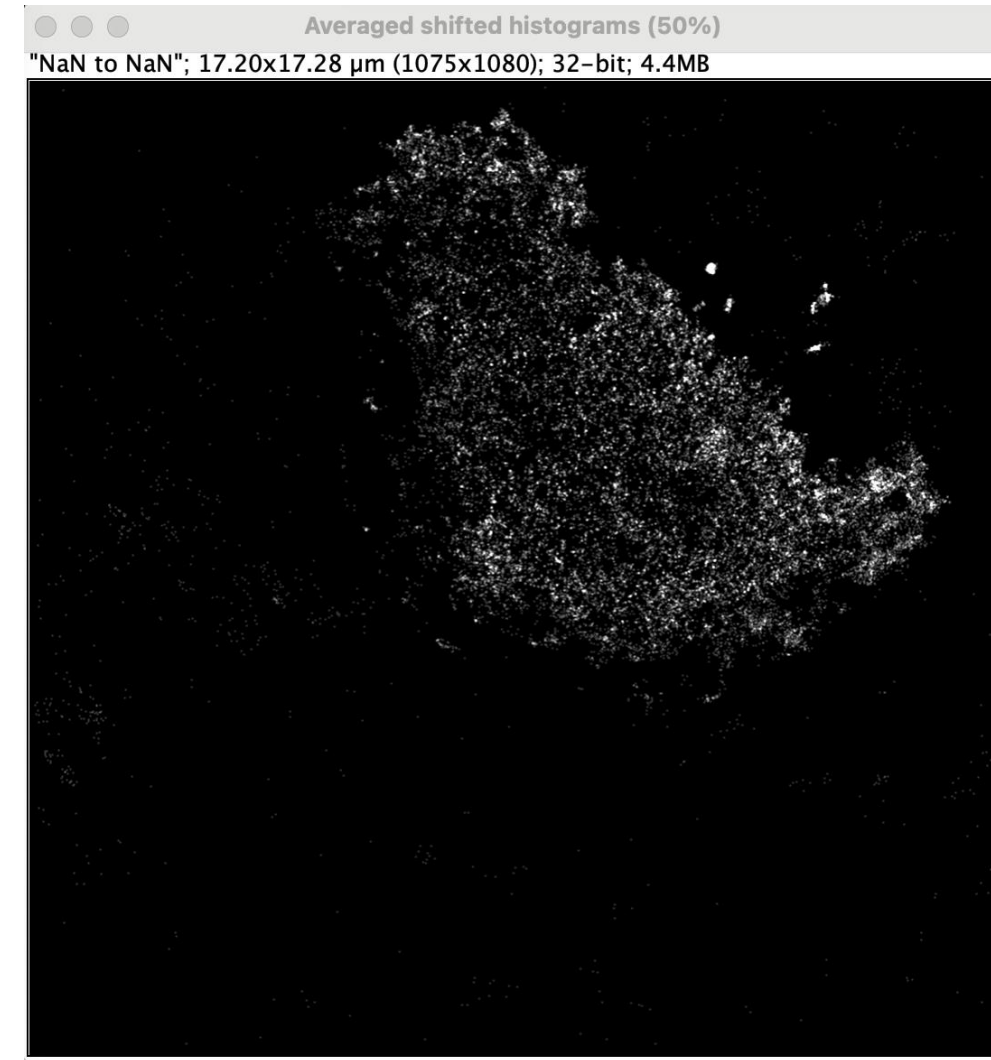
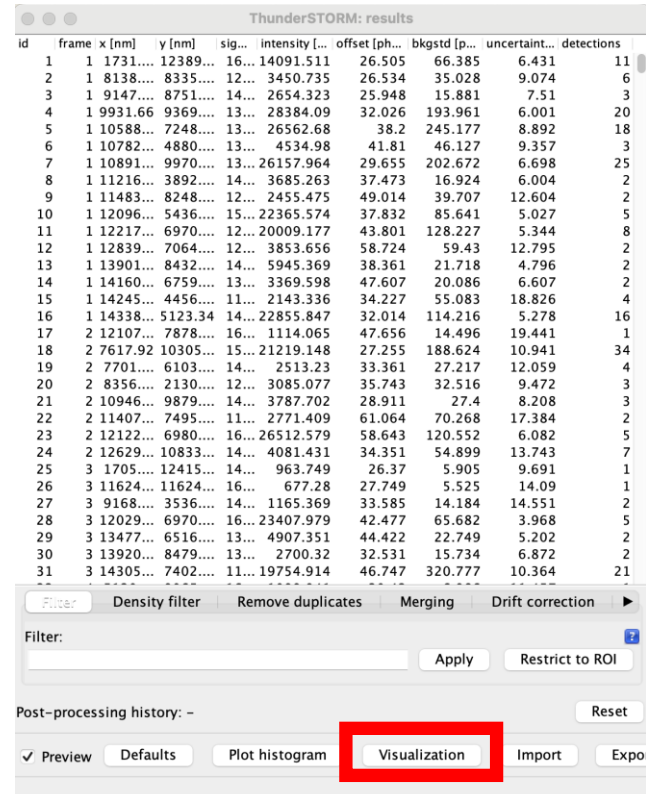
- Camera:** A text field labeled 'Camera setup'.
- Input File:** Contains a 'File format:' dropdown menu set to 'CSV (comma separated)' and a 'File path:' text field containing '001_-_GSD004_merge.csv' with a browse button ('...') to its right.
- Results concatenation:** Includes an 'Append to current table:' checkbox (which is unchecked) and a 'Starting frame number:' text field set to '1'.
- Visualization:** Includes a 'Live preview:' checkbox (which is checked) and a 'Raw image sequence for overlay:' dropdown menu.

At the bottom of the dialog, there are three buttons: 'Defaults', a help button (question mark icon), and 'OK' (highlighted in blue). To the right of the 'OK' button is a 'Cancel' button.

Creating a polygon region in Fiji



Click “visualisation”



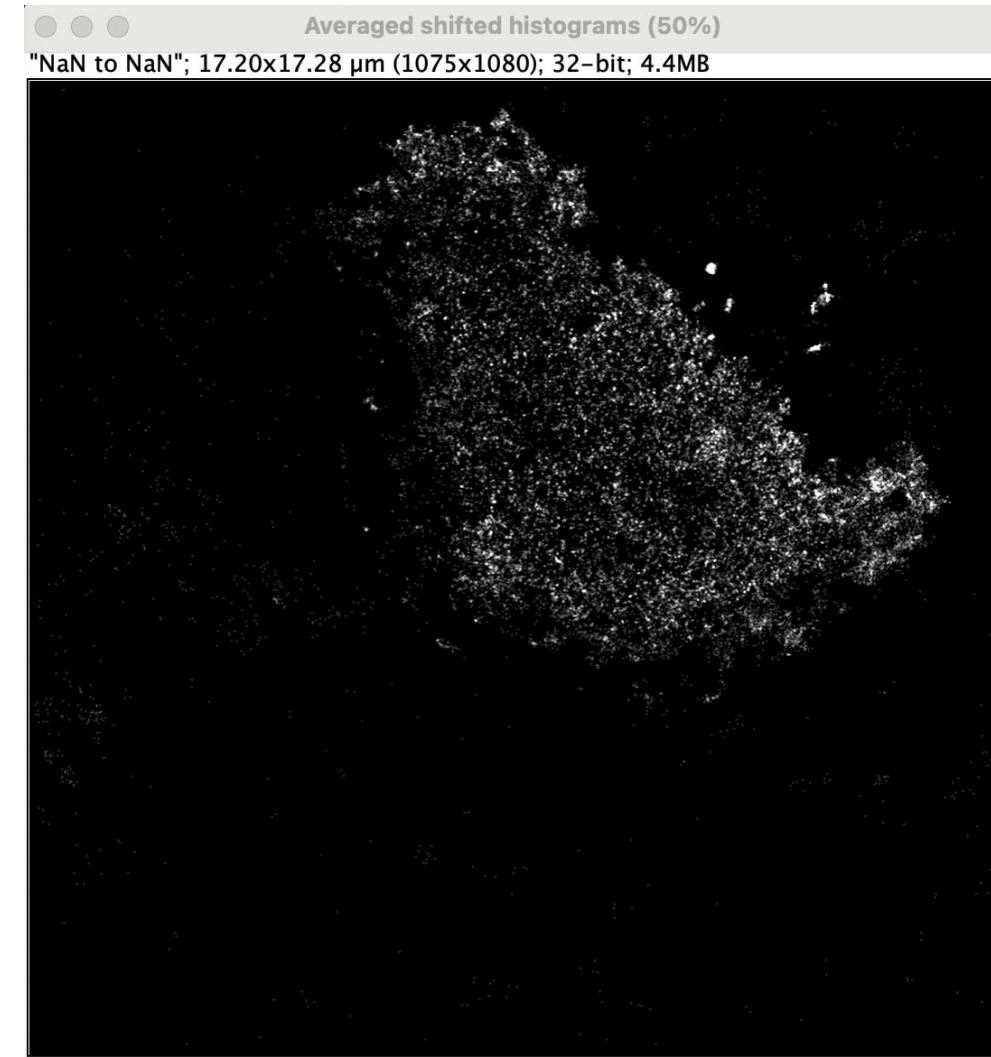
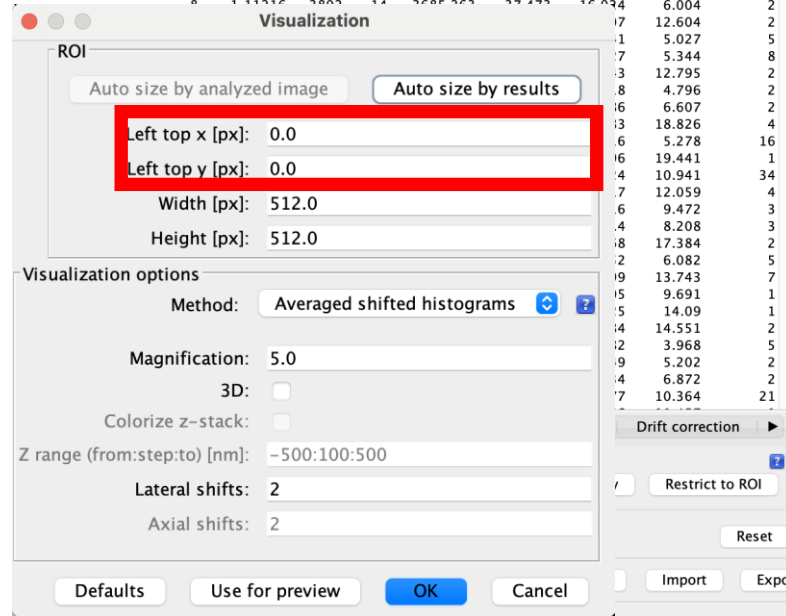
Creating a polygon region in Fiji

Make sure these values are set to 0 and click “ok”



ThunderSTORM: results

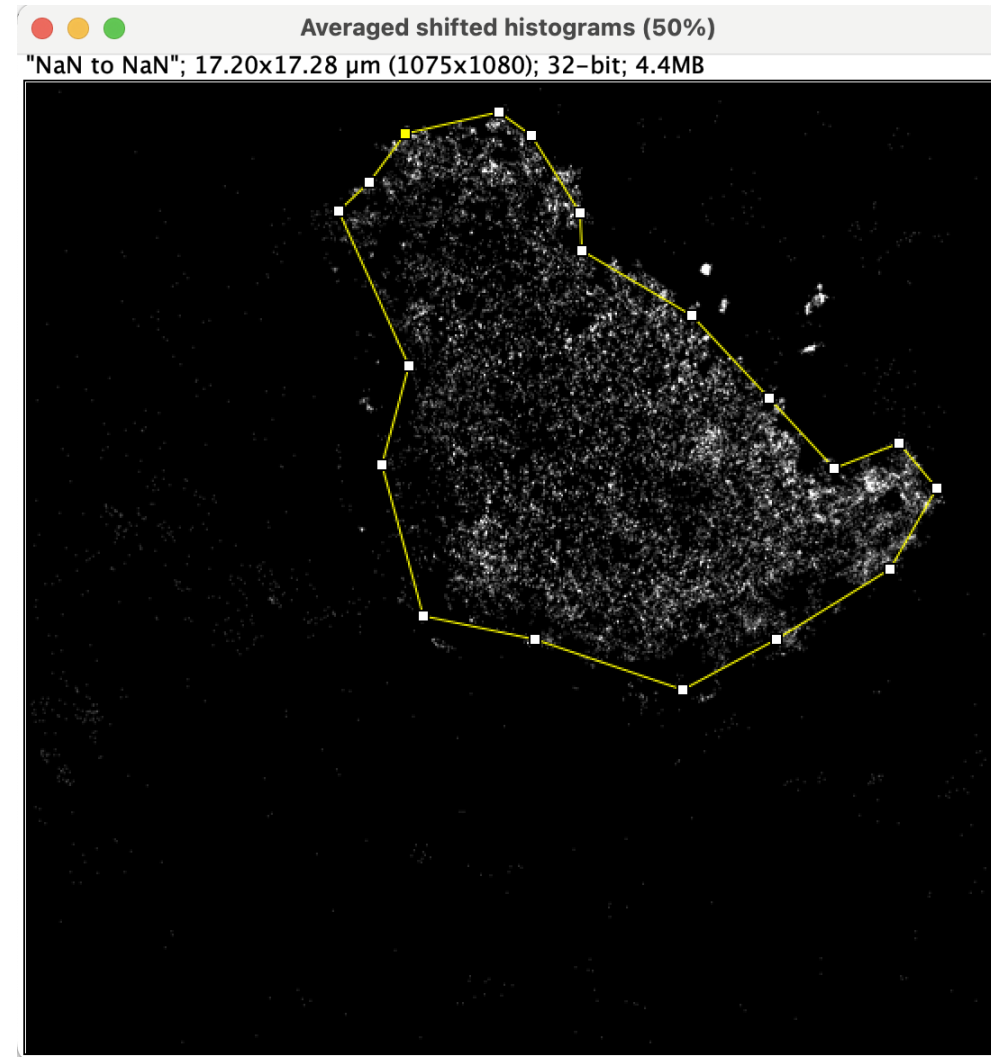
id	frame	x [nm]	y [nm]	sig...	intensity [...]	offset [ph...	bkgstd [p...	uncertain...	detections
1	1	1731...	12389...	16...	14091.511	26.505	66.385	6.431	11
2	1	8138...	8335...	12...	3450.735	26.534	35.028	9.074	6
3	1	9147...	8751...	14...	2654.323	25.948	15.881	7.51	3
4	1	9931.66	9369...	13...	28384.09	32.026	193.961	6.001	20
5	1	10588...	7248...	13...	26562.68	38.2	245.177	8.892	18
6	1	10782...	4880...	13...	4534.98	41.81	46.127	9.357	3
7	1	10891...	9970...	13...	26157.964	29.655	202.672	6.698	25
8	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2
9	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2
10	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2
11	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2
12	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2
13	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2
14	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2
15	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2
16	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2
17	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2
18	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2
19	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2
20	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2
21	1	11316...	3803...	14...	3685.363	33.473	16.034	6.004	2



Creating a polygon region in Fiji



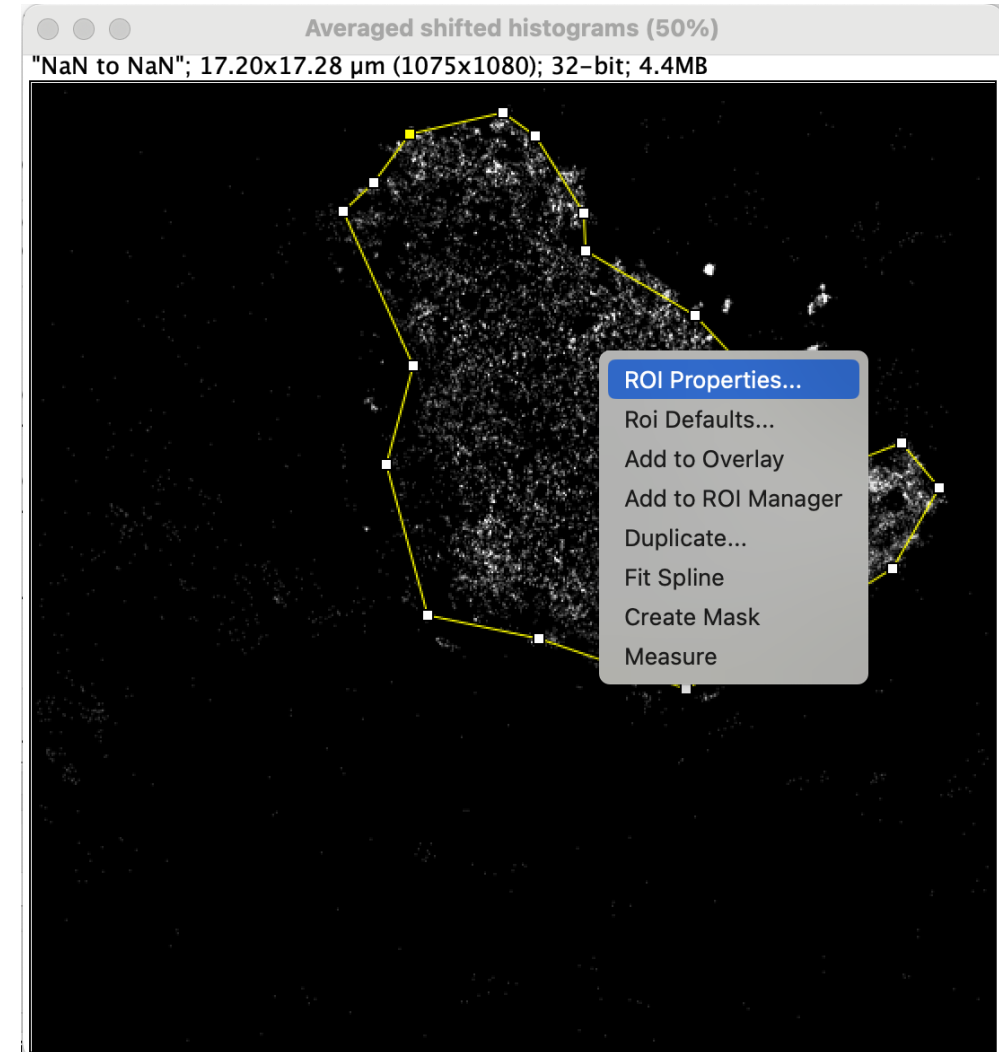
Click the polygon tool
and draw around the
cell



Creating a polygon region in Fiji



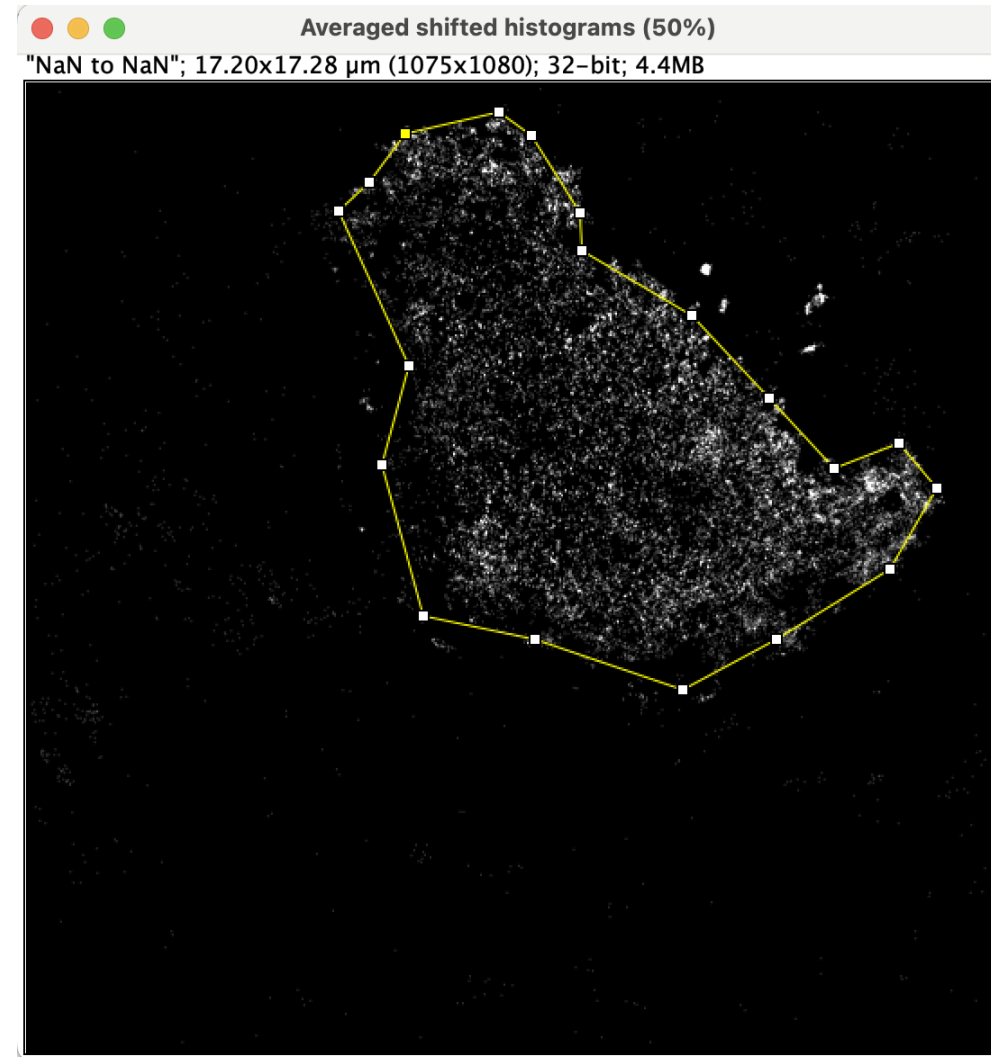
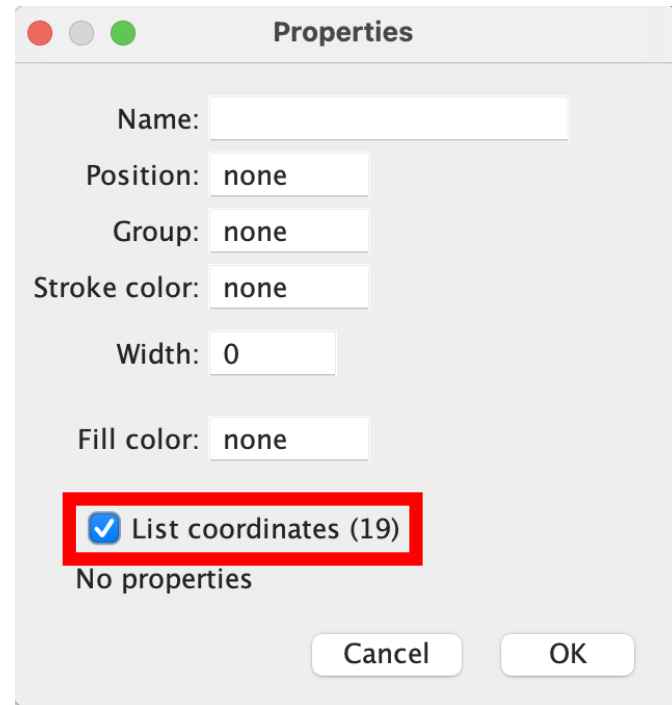
Right click on cell and
click "ROI
Properties..."



Creating a polygon region in Fiji



Tick "List coordinates" and click "ok"



Creating a polygon region in Fiji

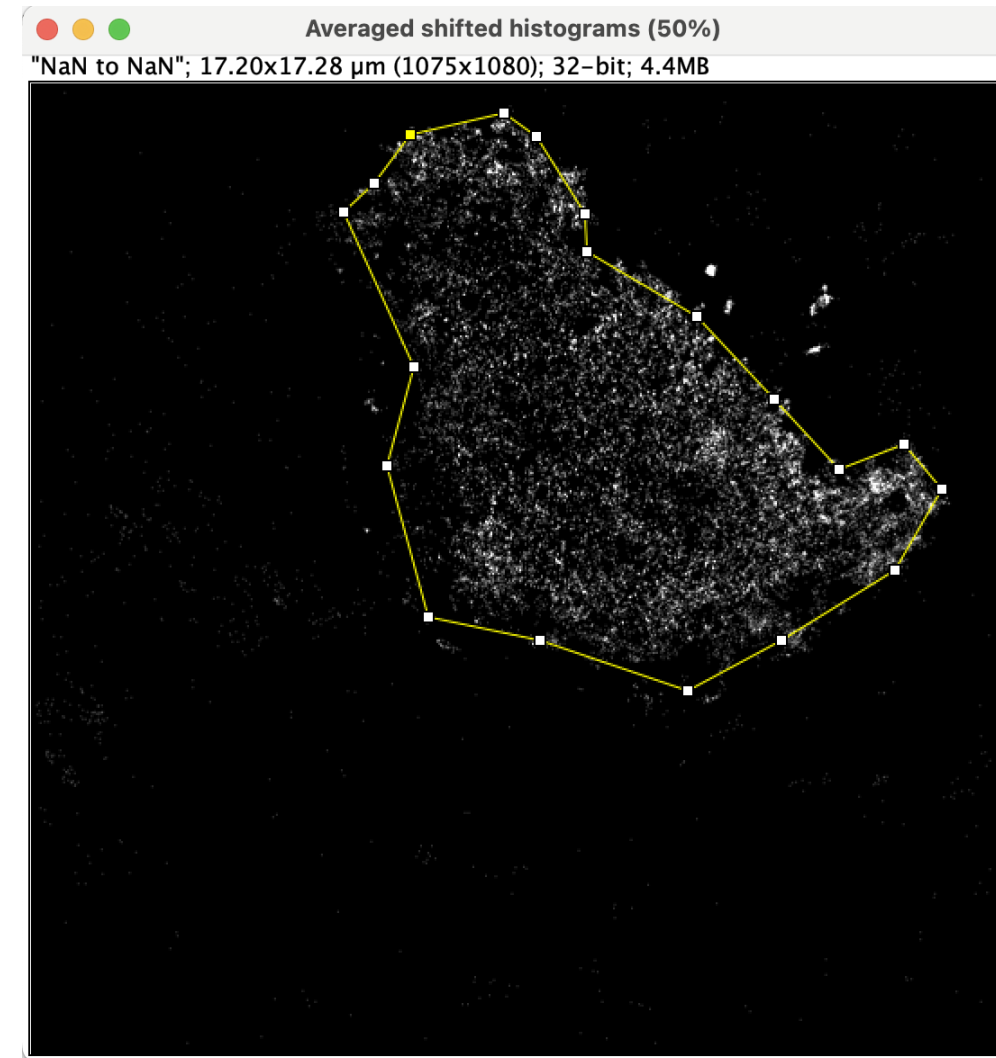


Right click the window with the list of coordinates and click "Save As..."

The image shows a window titled "XY_Averaged shift..." containing a table of coordinates. A right-click context menu is open over the table, with the "Save As..." option highlighted in blue.

X	Y
6.720	0.896
6.080	1.760
5.536	2.272
6.784	5.000
6.304	6.000
7.040	9.000
9.024	9.000
11.648	1.000
13.312	9.000
15.328	8.000
16.160	7.000
15.488	6.000
14.336	6.000
13.184	5.000
11.808	4.000

- Save As...
- Table Action
- Cut
- Copy
- Clear
- Select All
- Rename...
- Duplicate...
- Apply Macro...
- Sort...
- Plot...



Creating a polygon region in Fiji



Save it in the same directory as your detection file and give it the name: `{DETECTION_FILE_NAME}_ROI.csv`

