



Full wwPDB EM Validation Report ⓘ

Feb 4, 2024 – 06:05 PM EST

EMDB ID : EMD-43059
Title : Cryo-electron tomogram of mitochondria in cryo-FIB milled mouse embryonic fibroblasts with OPA1 deletion
Authors : Fry, M.Y.; Navarro, P.P.; Ananda, V.Y.; Ge, Y.; McDonald, J.L.; Hakim, P.; Luce, B.E.; Lugo, C.M.; Chao, L.H.
Deposited on : 2023-12-07
Resolution : Not provided

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMTomogramValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

EMDB validation analysis : 0.0.1.dev70
Validation Pipeline (wwPDB-VP) : 2.36

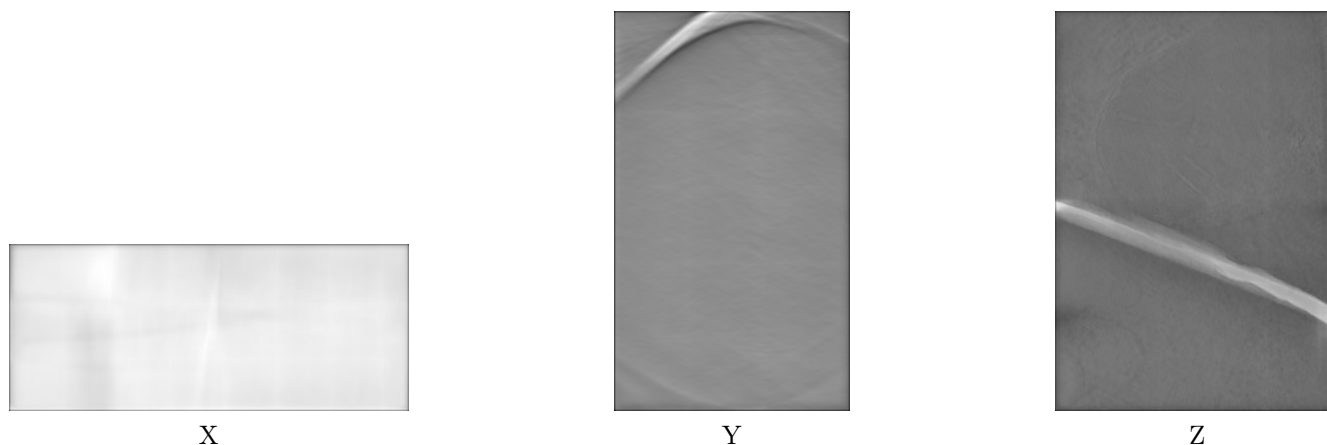
1 Experimental information

| Property | Value | Source |
|--------------------------------------|-------------------------------|-----------|
| EM reconstruction method | TOMOGRAPHY | Depositor |
| Imposed symmetry | Not Provided | |
| Number of tilted images used | 45 | Depositor |
| Resolution determination method | Not provided | |
| CTF correction method | Not provided | |
| Microscope | FEI TITAN KRIOS | Depositor |
| Voltage (kV) | 300 | Depositor |
| Electron dose ($e^-/\text{\AA}^2$) | 3.35 | Depositor |
| Minimum defocus (nm) | 3.5 | Depositor |
| Maximum defocus (nm) | 4.0 | Depositor |
| Magnification | Not provided | |
| Image detector | GATAN K3 BIOQUANTUM (6k x 4k) | Depositor |
| Maximum voxel value | 70.295 | Depositor |
| Minimum voxel value | -16.472 | Depositor |
| Average voxel value | 15.285 | Depositor |
| Voxel value standard deviation | 2.396 | Depositor |
| Recommended contour level | Not applicable | |
| Tomogram size (\AA) | 11272.66, 15883.199, 6618.0 | wwPDB |
| Tomogram dimensions | 511, 720, 300 | wwPDB |
| Tomogram angles ($^\circ$) | 90.0, 90.0, 90.0 | wwPDB |
| Grid spacing (\AA) | 22.06, 22.06, 22.06 | Depositor |

2 Tomogram visualisation [i](#)

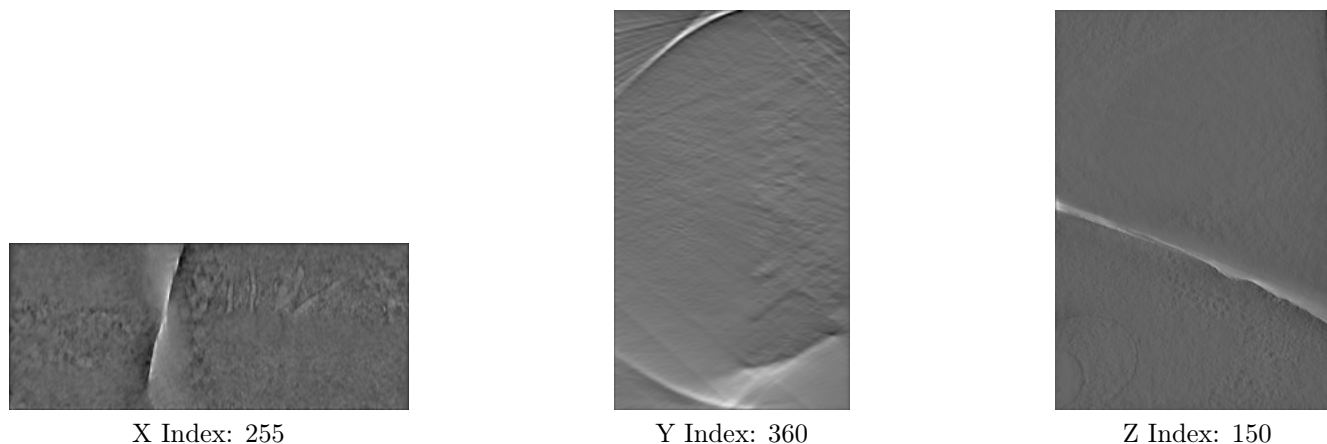
This section contains visualisations of the EMDB entry EMD-43059. These allow visual inspection of the internal detail of the tomogram and identification of artifacts.

2.1 Orthogonal projections [i](#)



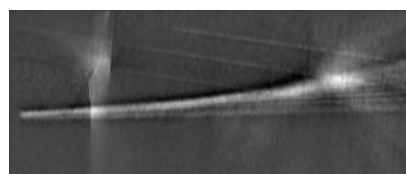
The images above show the tomogram projected in three orthogonal directions.

2.2 Central slices [i](#)



The images above show central slices of the tomogram in three orthogonal directions.

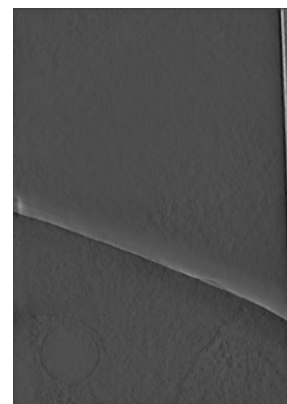
2.3 Largest variance slices [i](#)



X Index: 506



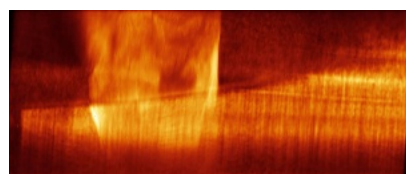
Y Index: 370



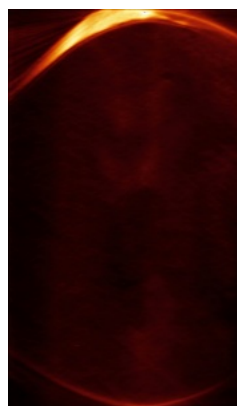
Z Index: 119

The images above show the largest variance slices of the tomogram in three orthogonal directions.

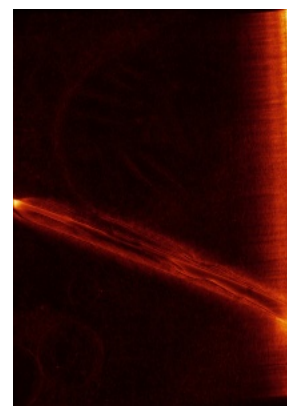
2.4 Orthogonal standard-deviation projections (False-color) [i](#)



X



Y



Z

The images above show the tomogram projected in three orthogonal directions.

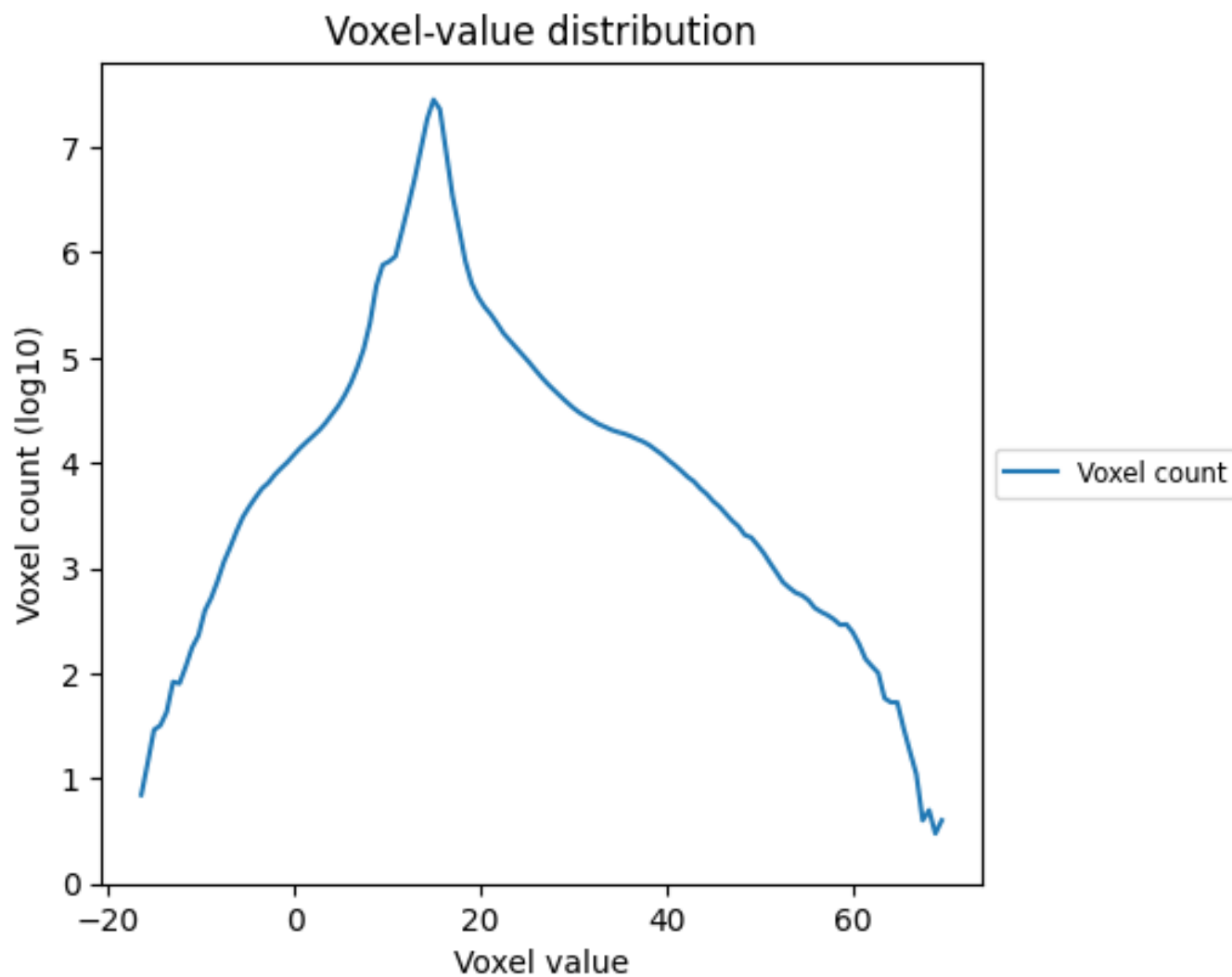
2.5 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

3 Tomogram analysis [i](#)

This section contains the results of statistical analysis of the tomogram.

3.1 Voxel-value distribution [i](#)



The voxel-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic.