

Highlights

- Localization patterns of NCX1, LTCC, and JP2 were quantitatively defined.
- NCX1 regularity decreased earlier than JP2/LTCC regularity in pressure-overloading.
- NCX1 overexpression recovered NCX1, JP2 and LTCC regularity in extended pressure-overloading.
- NCX1 was critical for the proper distribution of JP2 and LTCC in T-tubule.