

Highlights

- The uptake of nutrients by brown adipocytes is heterogeneous.
- Mass spectrometry–based imaging was used to quantify nutrient uptake.
- Uptake of chylomicron-derived lipids by brown adipocytes varied >fourfold.
- Uptake of glucose and fatty acids by brown adipocytes varied by ~2.3-fold.
- Data imply heterogeneity in the intrinsic metabolic properties of brown adipocytes.