

Annexin VI is attached to transverse-tubule membranes in isolated skeletal muscle triads

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Annexin VI is a 68-kDa protein of the Annexin family, a group of Ca^{2+} -dependent phospholipid-binding proteins widely distributed in mammalian tissues including skeletal muscle. We investigated a) which membrane system contributes Annexin VI to skeletal muscle triads, and b) whether Annexin VI removal affects triad integrity or function. Annexin VI was present in isolated triads and transverse tubules but not in heavy sarcoplasmic reticulum vesicles, indicating that Annexin VI binds to either free or triad-attached transverse tubules. Extraction with EGTA of Annexin VI from triads did not alter their migration as a single band in sucrose density gradients or their ouabain binding-site density, indicating that triad integrity does not require Annexin VI. Caffeine-induced Ca^{2+} release kinetics and Ca^{2+} uptake rates were likewise not affected by Annexin VI removal from triads, suggesting that Annexin VI is not involved in these functions. Annexin VI purified from rabbit skeletal muscle dis