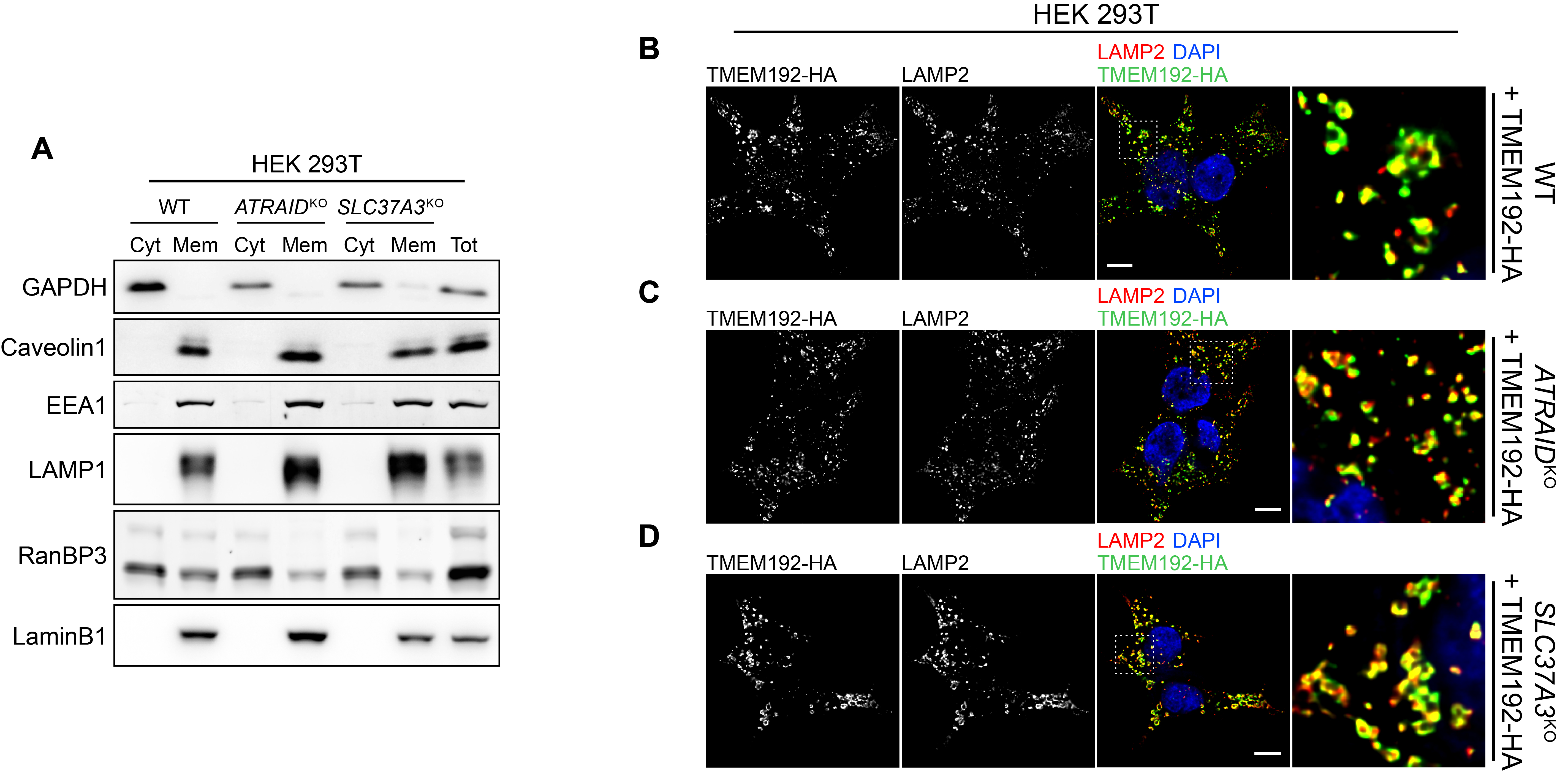
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**Figure 4 – figure supplement 1 Quality controls for the radioactive uptake assays.** (**A**)Immunoblot against markers for cytosol (GAPDH), plasma membrane (Caveolin1), early endosome (EEA1), lysosome (LAMP1), nucleosol (RaN-BP3), and nucleoskeleton (LaminB1) in cytosolic fractions and membranous fractions in wild-type, *ATRAID*KO and *SLC37A3*KO HEK 293T cells, demonstrating successful subcellular fractionation in the fractionation-based radioactive uptake assay. Cyt: cytosolic fraction. Mem: membranous fraction. Tot: total cell lysate. (**B**-**D**) Localization of HA tagged TMEM192 (TMEM192-HA), a lysosomal protein we expressed in wild-type (**B**), *ATRAID*KO (**C**) and *SLC37A3*KO (**D**) HEK 293T cells and used as a handle to immuno-precipitate lysosomes, shown with a lysosomal marker, LAMP2, demonstrating correct localization of TMEM192-HA to lysosomes and, consequently, successful purification of lysosomes in the lysosome-purification-based uptake assay. Scale bars represent 10 µm. Each image displayed is the representative example chosen from at least five similar images.