ZRT1 encodes a high-affinity zinc transporter. There are two systems for zinc uptake in yeast, one high-affinity and one lower-affinity. Zrt1p and the lower-affinity zinc transporter Zrt2p are similar to each other, and are members of the ZIP family of heavy metal ion transporters. Zap1p is a transcriptional regulator that controls levels of ZRT1 and ZRT2 mRNAs in response to intracellular zinc levels. Levels of Zrt1p are further controlled by regulated degradation. Zrt1p is found primarily at the plasma membrane in zinc-limited cells, but is transported to the vacuole for degradation upon exposure to high levels of zinc.