

Endocytic vesicles contain a calmodulin-activated Ca²⁺ pump that mediates the inhibition of acidification by calcium

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Endocytic vesicles isolated from rabbit reticulocytes contained an intrinsic Ca²⁺-pump activity that was dependent on ATP, activated by calmodulin and inhibited by vanadate. ⁴⁵Ca²⁺ uptake and acidification studies indicated that acidification of the endocytic vesicles inversely correlated with the Ca²⁺-pump activity. Acidification was inhibited by externally added Ca²⁺ and calmodulin and activated by vanadate and EGTA. It is suggested that intravesicular Ca²⁺ can act as a modulator of endocytic vesicle acidification. © 1990.