## Supplemental movies

Movie S1) 3D reconstruction and rotation of a clear cell perfused under control conditions. The 3D reconstruction was performed from a stack of 0.1-µm interval images, acquired using a Zeiss Radiance 2000 confocal microscope (Zeiss laboratories), from a 10-µm thick section of cauda epididymis stained for the V-ATPase (green) and HRP (red). The V-ATPase is distributed between short apical microvilli and the intracellular compartment of the cell. Apical endocytic vesicles containing HRP are visible in clear cells and principal cells.

## Movie S2) 3D reconstruction and rotation of a clear cell perfused luminally with ATP.

The 3D reconstruction was performed from a stack of 0.1-µm interval images, acquired using a Zeiss Radiance 2000 confocal microscope (Zeiss laboratories), from a 10-µm thick section of cauda epididymis stained for the V-ATPase (green) and HRP (red). The V-ATPase is present in long apical microvilli and no significant intracellular V-ATPase staining is detected. Apical endocytic vesicles containing HRP are visible in clear cells and principal cells.

Movie S3) 3D reconstruction and rotation of a clear cell perfused luminally with adenosine. The 3D reconstruction was performed from a stack of 0.1-µm interval images, acquired using a Zeiss Radiance 2000 confocal microscope (Zeiss laboratories), from a 10-µm thick section of cauda epididymis stained for the V-ATPase (green) and HRP (red). The V-ATPase is present in long apical microvilli and no significant intracellular V-ATPase staining is detected. Apical endocytic vesicles containing HRP are visible in clear cells and principal cells.