



Figure S2. TEM images of *B. napus* stigmatic papillae showing alternate trafficking patterns.

(A, B) *B. napus* Westar stigmatic papilla at 10 min post-pollination with self-compatible pollen. Vesicles (V) appear to be fusing to the papillar plasma membrane (PM) underneath the pollen contact site in 2/25 samples.

(C, D) *B. napus* Westar *Exo70A1* RNAi stigmatic papilla at 10 min post-pollination with wild-type compatible pollen. MVBs appear to fuse with the plasma membrane (PM) in 2/10 samples. This observation is consistent with the incomplete knockout phenotype of the *B. napus* Westar *Exo70A1* RNAi plants [17].

(E, F) *B. napus* W1 stigmatic papilla at 10 min post-pollination with self-incompatible pollen. MVBs appear to be targeted to the vacuole after self-incompatible pollinations. These images show a potential fusion of a MVB to the vacuole, and intact MVBs were not visible inside the vacuole as observed in 3/10 samples.

(G, H) *B. napus* *RFP:Exo70A1* W1 stigmatic papilla at 10 min post-pollination with self-incompatible pollen. MVBs were observed in the vacuole in 2/10 samples which is consistent with these plants displaying an incomplete self-incompatibility response [17].

The white boxed areas in (A, C, E, G) are shown in the (B, D, F, H), respectively. Scale bars (A, C, E, G) 1.5 μ m; (B, D, F, H) 500 nm.