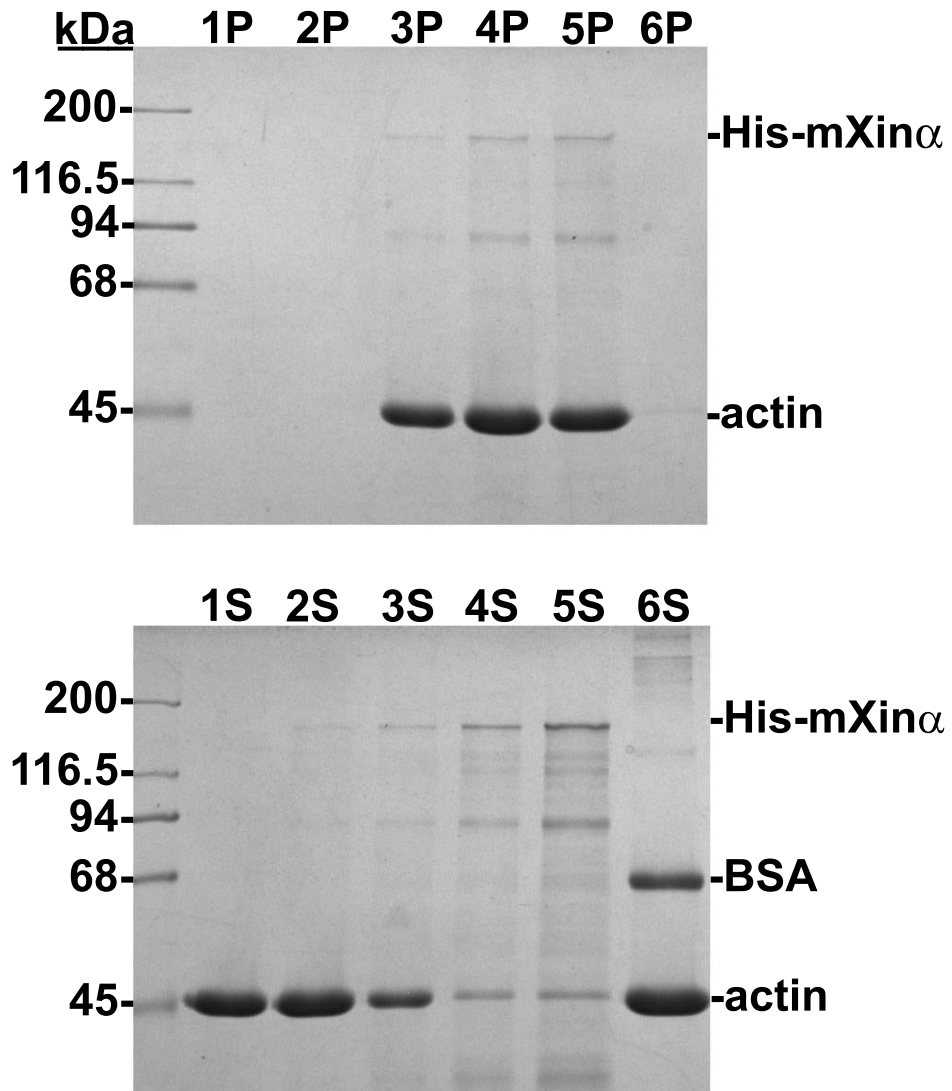


Supplemental Fig. 1. SDS-PAGE analysis of low speed actin cosedimentation with His-mXin $\alpha$ . The actin binding assay was performed with increasing amounts of His-mXin $\alpha$  as described under Fig. 4 legend. No detectable actin was pelleted from the tubes containing actin alone (lane 1P), actin plus 2.5  $\mu$ g His-mXin $\alpha$  (lane 2P) or actin plus bovine serum albumin (BSA) (lane 6P). His-mXin $\alpha$  at 10  $\mu$ g (lane 3P), 25  $\mu$ g (4P) and 50  $\mu$ g (5P) aggregated actin and can be co-pelleted down with actin by low speed centrifugation. Consistent with the result described in Fig. 4, the reaction between His-mXin $\alpha$  and actin reached saturation when 25  $\mu$ g His-mXin $\alpha$  was mixed with actin (4P and 5P).

Supplemental Fig. 2. Characterization of actin bundles formed by His-mXin $\alpha$  at different molar ratio of His-mXin $\alpha$  to actin. His-mXin $\alpha$  at different concentration was mixed with actin (2.4  $\mu$ M) and then the samples were processed to negative staining and electron microscopy. The molar ratio of His-mXin $\alpha$  to actin in (A) equals to 2:1, (B) 1:25, (C) 1:100 and (D) 1:200. At the ratio 1:200, no bundles were found but some filaments were tightly associated, as marked by the arrow (D). Bar=100 nm.

Supplemental Fig. 1



Supplemental Fig. 2

