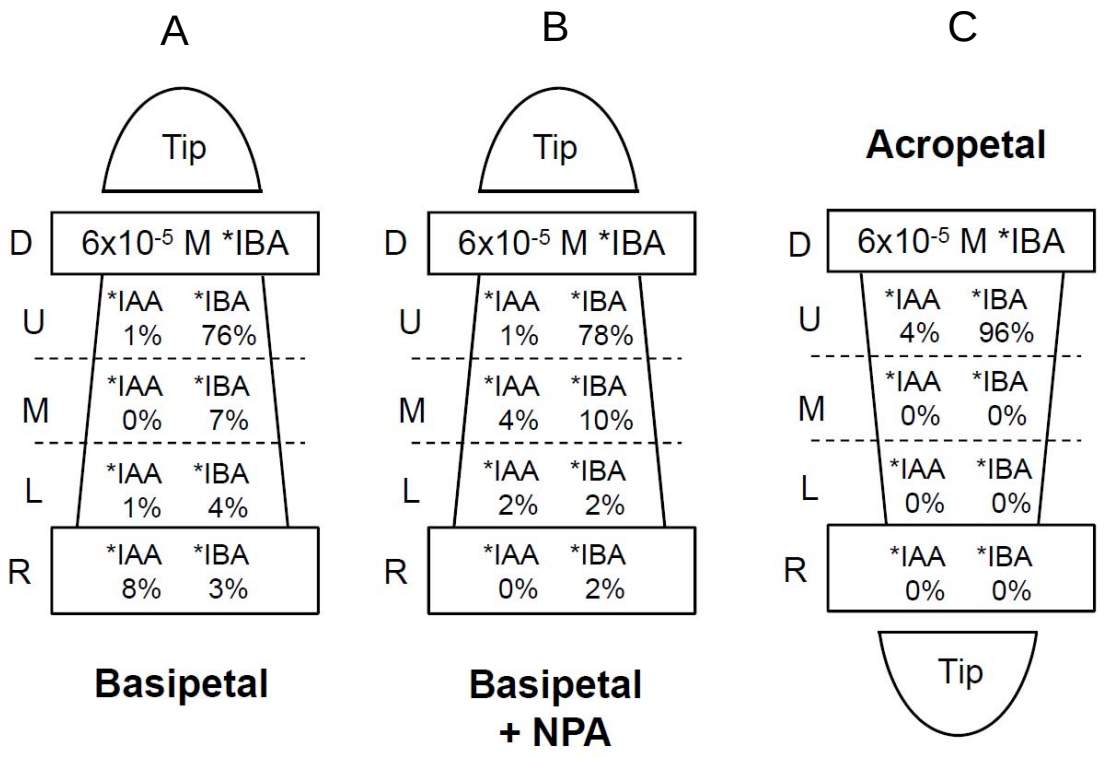

Supplemental Figure 1. Transport of free [$^{13}C_8$,$^{15}N_1$]IBA and [$^{13}C_8$,$^{15}N_1$]IAA derived from [$^{13}C_8$,$^{15}N_1$]IBA in maize coleoptiles after 3.5-h transport periods. Coleoptile tissues were collected from 6-day old dark-grown maize seedlings (cv. Silverqueen), and 6-mm sections were dissected 2-mm below the apical tips. Donor agar blocks containing 6 x 10^{-5} M [$^{13}C_8$,$^{15}N_1$]IBA were placed on the apical end of coleoptile sections, while receiver agar blocks were placed on the basal end. After a 3.5-h transport period, the coleoptile sections were dissected into three 2-mm segments and collected separately for analysis. IBA and IAA were extracted and quantified from each of the 2-mm coleoptile segment and the receiver block exactly as previously described (Barkawi *et al*., 2008). The enrichment of [$^{13}C_8$,$^{15}N_1$]IBA and [$^{13}C_8$,$^{15}N_1$]IAA over the unlabeled endogenous IBA and IAA pool was determined, and average values of three replicates are presented in the figure. Tip: the uppermost 2-mm coleoptile tissue; D: donor agar block; U: upper 2-mm coleoptile segment; M: middle 2-mm coleoptile segment; L: lower 2-mm coleoptile segment; R: receiver agar block. *IBA represents [$^{13}C_8$,$^{15}N_1$]IBA; *IAA represents [$^{13}C_8$,$^{15}N_1$]IAA derived from [$^{13}C_8$,$^{15}N_1$]IBA. **(A)** Basipetal transport of auxin. Both [$^{13}C_8$,$^{15}N_1$]IBA and [$^{13}C_8$,$^{15}N_1$]IAA derived from [$^{13}C_8$,$^{15}N_1$]IBA were transported into the receiver agar block. **(B)** Basipetal transport of auxin in the presence of 2 x 10^{-5} M NPA. NPA added in the receiver agar block significantly reduced the transport of [$^{13}C_8$,$^{15}N_1$]IAA into the receiver agar block, but did not reduce the transport of [$^{13}C_8$,$^{15}N_1$]IBA. **(C)** Acropetal transport of auxin, a negative control where the orientation of coleoptile sections was reversed. [$^{13}C_8$,$^{15}N_1$]IBA or [$^{13}C_8$,$^{15}N_1$]IAA was not detected in the receiver, lower, or middle coleoptile segment.