

982 **Supplementary Figure 1. KYL peptide specifically interacts with EPHA4**

983 Immunoblotting of biotin-streptavidin pull-down assay using antibodies against EPHA4
984 (upper panel) and V5 (lower panel). Lysates of N2a cells overexpressing EPHA4 or
985 EPHA5 were incubated with biotin-KYL or biotin-WDC peptide with/without non-
986 tagged peptide at the indicated concentration. EPHA4 was specifically pulled down by
987 biotin-KYL peptide (upper panel). EPHA5 was specifically pulled down by biotin-WDC
988 peptide (lower panel). SA, streptavidin sepharose.

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990 **Supplementary Figure 2. The upregulated A β levels induced by KYL peptide is**
991 **observed in neurons, not in glia**

992 (A) The primary neuron-enriched culture was performed by the addition of Ara-C. The
993 primary glia-enriched culture was performed without pre-coating the plate with poly-L-
994 ornithine. β III tubulin and ALDH1L1 were used as a cell-specific marker for neurons and
995 astrocytes, respectively. Immunoblotting using the EPHA4 antibody showed that EPHA4
996 expressed both in neurons and glia.

997 (B) KYL peptide was treated in the primary neuron-enriched or primary glia-enriched
998 culture. After 8 hrs of incubation, the secreted A β level was measured by two-side ELISA
999 (n = 4, mean \pm s.e.m., *p* value was assessed by Student's t-test).

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1004 **Supplementary Figures**

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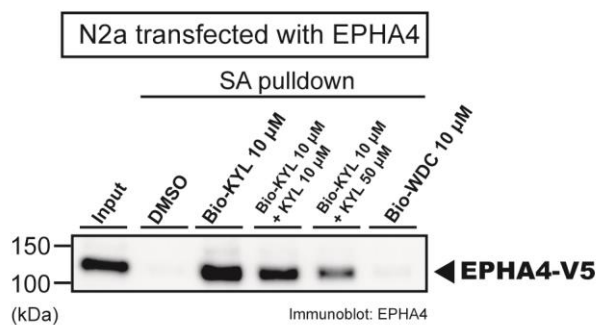
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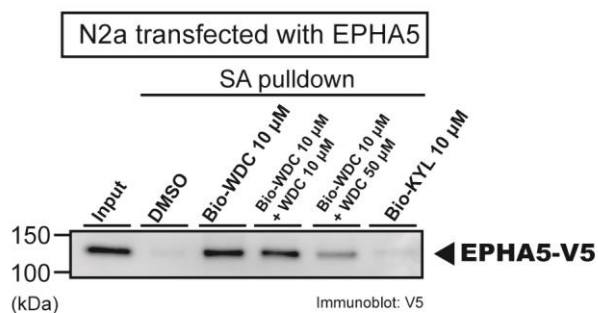
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1019 **Supplementary Figure 1**

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1040 Supplementary Figure 2

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