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Enrichment of selective miRNAs in exosomes and delivery of exosomal miRNAs *in vitro* and *in vivo*

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Running head: Exosome mediated delivery of miRNAs into macrophage.

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183 filter (EMD Millipore Corporation, Darmstadt, Germany). Next, the exosomes were pelleted
184 after the ultracentrifugation at 100,000 g for 120 minutes at 4 °C. PKH26 Red Fluorescent Cell
185 Linker Kits for General Cell Membrane Labeling (Sigma, St. Louis, MO) was purchased and
186 used according to manufacturer's protocol.

187 **Western blot analysis**

188 Western blot analysis was performed as described previously (48). Briefly, cells were
189 homogenized in RIPA lysis buffer supplemented with Protease Inhibitor Cocktail and
190 Phosphatase Inhibitor Cocktail (Sigma, St. Louis, MO). Protein lysates were resolved on SDS-
191 PAGE gels before transferred to the PVDF membrane (EMD Millipore Corporation, Darmstadt,
192 Germany). Anti-BCL2 antibody was obtained from Cell Signaling Technology (Danvers, MA).

193 Mouse monoclonal anti-GAPDH (Thermo Fisher Scientific, Waltham, MA) and anti-Tubulin
194 (Sigma, St. Louis, MO) were used as a loading control. The densities of bands were quantitated
195 using ImageJ software.

196 **Dynamic light scattering (DLS) and transmission electron microscopy (TEM)**

197 Dynamic light scattering (DLS) (Brookhaven 90plus Nano-particle Sizer) was performed to
198 determine the average size of exosome. Exosome preparation kit for transmission electron
199 microscopy imaging was obtained from 101Bio Corporation (Palo Alto, CA). The TEM images
200 were taken using a Philips CM120 EM.

201 **Statistical analysis**

202 All data were presented as means ± SD. All the data from three independent experiments were
203 averaged before normalization. For quantitative real-time PCR, same amount of cDNAs were