



**Figure S4. Phylogeny of vertebrate *Irs3* sequences.** Phylogeny of Insulin receptor substrate 3 (*Irs3*) sequences from diverse vertebrate species generated by Maximum likelihood. Phylogeny was rooted with sequences from cartilaginous fish (Elephant shark). Numbers at the nodes are the proportion of bootstraps supporting the nodes. Branch lengths are proportional to the amount of inferred change, with the scale bar at the bottom. Major lineages of vertebrates are labeled on their ancestral lineage. The diamond on the fish lineage indicates a gene duplication.