

Supplementary Tables

Table S1. Node and edge numbers of individual layers of the multiplex network

Network	Number of nodes	Number of edges
Protein-protein	15,390	131,087
Molecular complexes	8497	62,073
Pathways	4598	19,292

Table S2. Network metrics of the aggregated multiplex network used in the analyses. This network is obtained by integrating all layers in a single network and taking the largest connected component. In this network edges from different sources are merged and only one edge connects two nodes. Network diameter is the shortest distance between the most distant nodes in the network. Average shortest path length is the average of the shortest distances between all node pairs. Degree of a node is the number of edges connected to it. Average degree is the average of all nodes' degrees. The network metrics were obtained by Cytoscape App NetworkAnalyzer. Please note that the average shortest path length is named as characteristic path length in NetworkAnalyzer.

Number of nodes	Number of edges	Network diameter	Network radius	Average shortest path length	Average degree
16,409	205,012	9	5	3.42	24.99