

S2 Table – Hypergraph-based Connectivity Measures for Signaling Pathway Topologies

Binary Relation	# of Relations	
	in Reactome	Conversion Rule
catalysis-precedes	263,342	Directed Edge
chemical-affects	15,473	Directed Edge
consumption-controlled-by	8,079	Directed Edge
controls-expression-of	3,730	Directed Edge
controls-phosphorylation-of	3,184	Directed Edge
controls-production-of	8,052	Directed Edge
controls-state-change-of	113,558	Directed Edge
controls-transport-of	5,232	Directed Edge
controls-transport-of-chemical	5,105	Directed Edge
in-complex-with	140,302	Undirected Edge
reacts-with	1,922	Undirected Edge
used-to-produce	5,888	Directed Edge

Rules for converting SIF binary relations to directed edges. We ignore the “neighbor-of” binary relation.