




































Legend






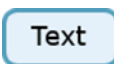









MetaCore

Objects

Enzymes		Generic objects
 Generic Enzymes		 Receptor ligands
Kinases	Phosphatases	 Transcription Factors
 Generic Kinases	 Generic phosphatases	 Proteins <i>General only</i>
 Protein Kinases	 Protein phosphatases	 Proteins <i>Binding</i>
 Lipid Kinases	 Lipid phosphatases	 Proteins <i>Membrane glycoprotein</i>
Phospholipases		 Compounds <i>MetaCore compound</i>
 Generic Phospholipases		 Compounds <i>Predicted metabolite or user's structure</i>
Protease	Receptors	 Inorganic ions
 Generic protease	 Generic Receptors	 Reactions <i>Biochemical reaction, Transport reaction, Particle transformation, Protein processing, or RNA maturation</i>
 Metalloproteases	 G-Protein-Coupled Receptors (GPCR)	 DNA
	 Receptors with kinase activity	 RNA

Membrane Transport Proteins	GTPases and adaptor/regulators	Groups of objects
 Generic Channels	 GTP-Binding Protein alpha Subunits (G-alpha)	 A complex or a group <i>Objects physically connected into a complex or related as a family, manually curated</i>
 Ligand-Gated Ion Channels	 Monomeric GTP-Binding Proteins (Small GTPases)	 Related objects on networks <i>Objects that are grouped automatically as part of network building. R-click to expand</i>
 Voltage-Gated Ion Channels	 GTP-Binding Protein beta/gamma Subunits (G beta/gamma)	
 Transporters	 GTP-Binding Protein Regulators (GDI, GAP, GEF, etc.)	 Custom Associations <i>Group of objects created by user</i>






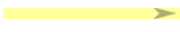






Objects on Maps

Cellular Structures	Other Objects on Maps
 Mitochondria	 Organism-specific object <i>Object described only for a specific organism or group of organisms</i>
 Endoplasmic Reticulum	 Path Start
 Golgi Apparatus	 Note
 Cell Nucleus	 Normal Processes <i>Static description</i>
 Lysosomes	 Normal Processes <i>Links to metabolic and regulatory maps</i>
 Peroxisomes	 Pathologic Processes
 Cytoplasm	
 Extracellular Space	 Pathological Processes <i>Links to disease and tox process maps</i>

Interactions

Interactions have attributes, direction, mechanism, and effect.







Direction

Interactions on Networks	Canonical Signal Transduction Pathways
<p> Incoming Interactions <i>Mouse-over an object to see incoming and outgoing interactions</i></p> <p> Outgoing Interactions</p>	<p> Canonical Pathways <i>Pathways used in networks</i></p> <p> Canonical Pathways <i>Pathways highlighted using Show/Hide</i></p>
If you have uploaded your own Interactions using MetaLink	Interactions on Maps
<p> Interaction in network <i>The interaction is present in both your uploaded dataset AND in MetaCore AND was included by the network building algorithm</i></p> <p> Interaction not in network <i>The interaction is present in both your uploaded dataset AND in MetaCore BUT was excluded by the network building algorithm. It is only shown for information purposes</i></p> <p> Interaction not in MetaCore <i>The interaction is present in your uploaded dataset BUT NOT in MetaCore</i></p>	<p> Disrupted <i>Interaction disrupted in disease</i></p> <p> Weakened <i>Interaction weakened in disease</i></p> <p> Emergent <i>Interaction emergent in disease</i></p> <p> Enhanced <i>Interaction enhanced in disease</i></p> <p> Organism-specific interaction <i>Interaction described only for a specific organism or group of organisms</i></p>

Mechanisms











Physical interactions	
<p>B Binding <i>Physical interaction between two or more molecules</i></p>	<p>Tn Biological Transport <i>Transport of a molecule from one cellular compartment (including extracellular) to another</i></p>
<p>C Cleavage <i>Molecule is split into two or more fragments</i></p>	<p>Z Catalysis <i>Chemical reaction facilitated by an enzyme</i></p>
<p>CM Covalent Modification <i>Chemical modification of functional groups on proteins or nucleotides</i></p>	<p>Tr Transcription Regulation <i>Transcription factor binds to target gene's promoter to initiate/stimulate/terminate transcription</i></p>
<p>+P Phosphorylation <i>Addition of a phosphoryl group by a kinase</i></p>	<p>cRT Co-regulation of Transcription <i>Physical interaction of a transcription coregulator to target gene's promoter</i></p>
<p>-P Dephosphorylation <i>Removal of a phosphoryl group by a phosphatase</i></p>	<p>Rg Regulation <i>Influence on reaction, not defined by Catalysis mechanism</i></p>
<p>T Transformation <i>GTP/GDP exchange of a GTPase induced by regulators</i></p>	<p>M MicroRNA Binding <i>Physical interaction between a microRNA and its target mRNA</i></p>

Functional interactions	
<p>IE Influence on Expression <i>Molecule has an indirect influence on gene expression</i></p>	<p>PE Pharmacological Effect caused by drug interactions <i>The action of a drug that affects the activity or metabolism of another drug</i></p>
<p>Cn Competition <i>Two or more molecules compete for binding to a target</i></p>	<p>TE Toxic Effect caused by drug interactions <i>The action of a drug that affects the toxicity of another drug</i></p>
<p>? Unspecified <i>Positive or negative effect on target molecule without defined mechanism</i></p>	

Related objects	Effects
 Group <i>Relationship between objects considered as a unit</i>	 Positive / activation
 Complex-Subunit <i>Relation between a complex and its subunits</i>	 Negative / inhibition
 Similarity <i>Chemical compounds with a similar Tanimoto score</i>	 Unspecified

Experiments

How your experimental data interacts with MetaCore data

On networks		On maps
	Up regulated object	
	Down-regulated object	
	Object with mixed signal <i>Experiment contains both up- and down-regulated signals that map to a single object on the map/network</i>	
	Gene variants <i>Variants in a VX file map to this object</i>	
	Multi-omics data <i>Experimental data from multiple datatypes, such as gene expression and gene variant, map to the same object</i>	

For more information contact Customer Service at [LS Product Support](#).