

# Quick reference guide

## User Data

NETWORKS		MAPS
	<b>Up-regulated (+)</b> Object has user data with positive value	
	<b>Down-regulated (-)</b> Object has user data with negative value	
	<b>Mixed-signal (+ /-)</b> Object has user data with both positive and negative values	
	<b>Gene variants</b> Object has user data with gene variants	
	<b>Mixed data</b> Object has user data with both expression values and gene variants	

## Network Objects

ENZYMES	GENERIC CLASSES
<p><b>Generic enzyme</b></p> <p><b>KINASE</b></p> <ul style="list-style-type: none"> <li>Generic kinase</li> <li>Protein kinase</li> <li>Lipid kinase</li> </ul> <p><b>PHOSPHATASE</b></p> <ul style="list-style-type: none"> <li>Generic phosphatase</li> <li>Protein phosphatase</li> <li>Lipid phosphatase</li> </ul> <p><b>PHOSPHOLIPASE</b></p> <ul style="list-style-type: none"> <li>Generic phospholipase</li> </ul> <p><b>PROTEASE</b></p> <ul style="list-style-type: none"> <li>Generic protease</li> <li>Metalloprotease</li> </ul> <p><b>GTPASE</b></p> <ul style="list-style-type: none"> <li>G-alpha</li> <li>RAS - superfamily</li> </ul>	<ul style="list-style-type: none"> <li>Receptor ligand</li> <li>Transcription factor</li> <li>Protein</li> <li>Compound</li> <li>Predicted metabolite or user's structure</li> <li>Inorganic ion</li> <li>Reaction</li> <li>DNA</li> <li>RNA</li> <li>Generic binding protein</li> <li>Cell membrane glycoprotein</li> </ul>
<p><b>CHANNELS/TRANSPORTERS</b></p> <ul style="list-style-type: none"> <li>Generic channel</li> <li>Ligand-gated ion channel</li> <li>Voltage-gated ion channel</li> <li>Transporter</li> </ul>	<p><b>RECEPTORS</b></p> <ul style="list-style-type: none"> <li>Generic Receptor</li> <li>GPCR</li> <li>Receptors with kinase activity</li> </ul>
	<p><b>G PROTEIN ADAPTOR/REGULATORS</b></p> <ul style="list-style-type: none"> <li>G beta/gamma</li> <li>Regulators (GDI, GAP, GET, etc.)</li> </ul>
<p><b>GROUPS OF OBJECTS</b></p> <ul style="list-style-type: none"> <li><b>A complex or a group</b> Proteins physically connected into a complex or related as a family</li> <li><b>Logical association</b> Proteins linked by logical relations or physical interactions</li> <li><b>Custom association</b> Group of collapsed objects chosen by user</li> </ul>	

## Interactions between objects

### EFFECTS

-  Positive / activation
-  Negative / inhibition
-  Unspecified

### MECHANISMS

#### PHYSICAL INTERACTIONS

- B** **Binding**  
Physical interaction between molecules
- C** **Cleavage**  
Cleavage of a protein at a specific site yielding distinctive peptide fragments. Proteolytic cleavage can be carried out by both enzymes and compounds
- CM** **Covalent modifications**  
Covalent binding of a small chemical groups to protein amino acids or DNA/RNA nucleotides.
- +P** **Phosphorylation**  
Protein activity is altered via addition of a phosphate group
- P** **Dephosphorylation**  
Protein activity is altered via removal of a phosphate group
- T** **Transformation**  
Protein activity regulation by binding & hydrolysis of GTP
- Tn** **Transport**  
Transport of a protein or a compound between organelles
- Z** **Catalysis**  
Catalysis of an enzymatic reaction
- Tr** **Transcription regulation**  
Physical binding of a transcription factor to target gene's promoter
- cRT** **Co-regulation of transcription**  
Influences on gene expression by direct binding with transcription machinery or by chromatin remodelling
- Rg** **Regulation**  
Influence on the biochemical reaction by changing its composition
- M** **MicroRNA binding**  
Regulation of gene expression by binding of microRNA to target mRNA

#### FUNCTIONAL INTERACTIONS

- IE** **Influence on expression**  
Indirect influence of chemical compound or protein on the amount of another protein
- Cn** **Competition**  
When two molecules compete for the interaction with the third molecule
- ?** **Unspecified interactions**  
Influence on activity of protein or RNA without determined mechanism
- PE** **Drug-Drug interactions. Pharmacological effect**  
Drugs change pharmacological effects of other drugs, for instance by competing for drug metabolism enzymes or organic transporters
- TE** **Drug-Drug interactions. Toxic effect**  
Drugs change toxic effects of other drugs, for instance by competing for drug metabolism enzymes or organic transporters

#### LOGICAL RELATIONS

- GR** **Group relation**  
Object belongs to a generic group of related objects
- CS** **Complex subunit**  
Protein is a subunit of a protein complex
- SR** **Similarity relation**  
Chemically similar compounds with chosen Tanimoto similarity score

### LINKS ON NETWORKS

-  **Incoming interaction**  
When the mouse is over object, yellow link indicates direction to object
-  **Outgoing interaction**  
Cyan link indicates direction FROM the object

#### INTERACTIONS FROM CUSTOM LIST (MetaLink™)

-  **Interaction is in the network**  
Interaction is represented by a thin solid line and is highlighted in blue
-  **Interaction is in the base, but not in network**  
Interaction is highlighted in yellow
-  **Interaction is in the network**  
Interaction is highlighted in magenta

#### CANONICAL PATHWAYS

-  **Canonical pathway**  
The link is highlighted in a thick cyan or magenta line

### LINKS ON MAPS

-  **Disrupts in disease**
-  **Weakens in disease**
-  **Emerges in disease**
-  **Enhances in disease**
-  **Species specific interactions**

## Objects on maps

#### LOCALIZATION

-  Mitochondria
-  EPR
-  Golgi
-  Nucleus
-  Lysosome
-  Peroxisome
-  Cytoplasm
-  Extracellular

#### OTHER MAP OBJECTS

Comments

-  Note
-  Normal process
-  Pathological process

Blocks

-  Normal process
-  Pathological process
-  Species specific object
-  Path start

For more information, visit [clarivate.com/metacore](http://clarivate.com/metacore)

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