

# METACORE QUICK REFERENCE GUIDE

## USER DATA

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

## NETWORK OBJECTS

ENZYMES	GENERIC CLASSES
<p>Generic enzyme</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> </ul>
CHANNELS/TRANSPORTERS	RECEPTORS
<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>	<ul style="list-style-type: none"> <li>Generic</li> <li>GPCR</li> <li>Receptors with kinase activity</li> </ul>
G PROTEIN ADAPTOR/REGULATORS	
<ul style="list-style-type: none"> <li>G beta/gamma</li> <li>Regulators (GDI, GAP, GEF, etc.)</li> </ul>	
GROUPS OF OBJECTS	
<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
<ul style="list-style-type: none"> <li>Positive / activation</li> <li>Negative / inhibition</li> <li>Unspecified</li> </ul>
MECHANISMS
PHYSICAL INTERACTIONS
<ul style="list-style-type: none"> <li><b>B</b> Binding Physical interaction between molecules</li> <li><b>C</b> Cleavage Cleavage of a protein at a specific site yielding distinctive peptide fragments. Proteolytic cleavage can be carried out by both enzymes and compounds</li> <li><b>CM</b> Covalent modifications Covalent binding of a small chemical groups to protein amino acids or DNA/RNA nucleotides.</li> <li><b>+P</b> Phosphorylation Protein activity is altered via addition of a phosphate group</li> <li><b>-P</b> Dephosphorylation Protein activity is altered via removal of a phosphate group</li> <li><b>T</b> Transformation Protein activity regulation by binding &amp; hydrolysis of GTP</li> <li><b>Tn</b> Transport Transport of a protein or a compound between organelles</li> <li><b>Z</b> Catalysis Catalysis of an enzymatic reaction</li> <li><b>Tr</b> Transcription regulation Physical binding of a transcription factor to target gene's promoter</li> <li><b>cRT</b> Co-regulation of transcription Influences on gene expression by direct binding with transcription machinery or by chromatin remodelling</li> <li><b>Rg</b> Regulation Influence on the biochemical reaction by changing its composition</li> <li><b>M</b> MicroRNA binding Regulation of gene expression by binding of microRNA to target mRNA</li> </ul>
FUNCTIONAL INTERACTIONS
<ul style="list-style-type: none"> <li><b>IE</b> Influence on expression Indirect influence of chemical compound or protein on the amount of another protein</li> <li><b>Cn</b> Competition When two molecules compete for the interaction with the third molecule</li> <li><b>?</b> Unspecified interactions Influence on activity of protein or RNA without determined mechanism</li> <li><b>Pr</b> Processing Protein is a product of posttranslational modification.</li> <li><b>PE</b> Drug-Drug interactions. Pharmacological effect Drugs change pharmacological effects of other drugs, for instance by competing for drug metabolism enzymes or organic transporters</li> <li><b>TE</b> Drug-Drug interactions. Toxic effect Drugs change toxic effects of other drugs, for instance by competing for drug metabolism enzymes or organic transporters</li> </ul>
LOGICAL RELATIONS
<ul style="list-style-type: none"> <li><b>GR</b> Group relation Object belongs to a generic group of related objects</li> <li><b>CS</b> Complex subunit Protein is a subunit of a protein complex</li> <li><b>SR</b> Similarity relation Chemically similar compounds with chosen Tanimoto similarity score</li> </ul>

LINKS ON NETWORKS
<ul style="list-style-type: none"> <li><b>Incoming interaction</b> When the mouse is over object, yellow link indicates direction to object</li> <li><b>Outgoing interaction</b> Cyan link indicates direction FROM the object</li> </ul>
INTERACTIONS FROM CUSTOM LIST (MetaLink™)
<ul style="list-style-type: none"> <li><b>Interaction is in the network</b> Interaction is represented by a thin solid line and is highlighted in blue</li> <li><b>Interaction is in the base, but not in network</b> Interaction is highlighted in yellow</li> <li><b>Interaction is in the network</b> Interaction is highlighted in magenta</li> </ul>
CANONICAL PATHWAYS
<ul style="list-style-type: none"> <li><b>Canonical pathway</b> The link is highlighted in a thick cyan or magenta line</li> </ul>
LINKS ON MAPS
<ul style="list-style-type: none"> <li>Disrupts in disease</li> <li>Weakens in disease</li> <li>Emerges in disease</li> <li>Enhances in disease</li> <li>Species specific interactions</li> </ul>

## OBJECTS ON MAPS

LOCALIZATION	OTHER MAP OBJECTS
<ul style="list-style-type: none"> <li>Mitochondria</li> <li>EPR</li> <li>Golgi</li> <li>Nucleus</li> <li>Lysosome</li> <li>Peroxisome</li> <li>Cytoplasm</li> <li>Extracellular</li> </ul>	<p><b>Comments</b></p> <ul style="list-style-type: none"> <li>Note</li> <li>Normal process</li> <li>Pathological process</li> </ul> <p><b>Blocks</b></p> <ul style="list-style-type: none"> <li>Normal process</li> <li>Pathological process</li> </ul> <ul style="list-style-type: none"> <li>Species specific object</li> <li>Path start</li> </ul>

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