A Molecular Concept Map for Human Biology and Disease

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An integrated view

Result 1: Transcription factor X regulates target genes (x1, x2, …x100)

Result 2: Disease Y over-expresses genes (y1, y2, …y100)

Result 3: Drug inhibitor of Protein A represses genes (a1, a2, …a100)

Result 4: Protein complex Z includes proteins (z1, z2, …z100)
The Molecular Concept Map Project
Myc Concept Analysis

- Schlosser et al., Nucleic Acids Res, 2005
- Conditional over-expression of Myc in human B-cell line P493-6
- 59 genes strongly induced

<table>
<thead>
<tr>
<th>Source</th>
<th>Concept</th>
<th>Overlap</th>
<th>OR</th>
<th>P-value</th>
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</thead>
<tbody>
<tr>
<td>GO</td>
<td>rRNA processing</td>
<td>17</td>
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<td>Literature</td>
<td>Down-regulated in acute radiation toxicity</td>
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<td>Oncomine</td>
<td>FLT3 mutation positive AML</td>
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<td>Myc promoter binding sites</td>
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<td>Metastatic prostate cancer vs. localized</td>
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<td>6.1369</td>
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</table>
Myc Concept Analysis

RNA processing

Downregulated by PLZF

FLT3 Mutation

Myc promoter binding sites

Downregulated by Myc expression in vitro

Induced by Myc expression in vitro

Gene Symbol
- NPM1
- PA2G4
- NS
- RPS24
- FBL
- NOLC1
- EIF4A1
- KIAA0020
- EXOSC7
- PHB
- RRS1
- HSPA9B
- MK1671P
- DDX48
- NOL1
- PDIR
- FLJ10439
- WDR43
- GRP58
- DDX54

Colonic Adenocarcinoma vs. normal colon

Multiple Myeloma vs. normal B-cells

FLI1

Colon Adenocarcinoma

Normal Colon
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