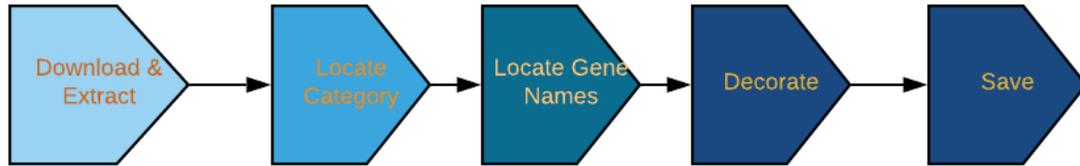


CPTAC WikiPathways for Assay Portal

1. Transform Workflow



2. Tools & Library

XML XPath Library
JavaScript D3 Library

3. Transform

3.1. Download and Extract

Download [SVG](#) and [GPML](#) WikiPathways files
Extract to 2 separate folders
SVG files will be used for graphic display
GPML will be used for extracting metadata such as category

3.2. Locate Category

Parse GPML file and extract Category Name

```
$xpath->query('//*[@Pathway:Comment[contains(@Source, "WikiPathways-category")]']');
```

3.3. Locate Lists of Gene Names

Search for lists of gene names related to Assay Portal's Assays

```
$xpath->query('//*[@svg:text="" . $gene_symbol[\"gene_symbol\"] . ""]')
```

3.4. Decorate Gene Name Box

Change the color of Gene Name boxes

```
$style = str_replace("fill:none;", "fill:#00FF00; fill-opacity:0.6;", $style);
```

```
$node->removeAttribute("style");
```

```
$node->setAttribute("style", $style);
```

Create href link to decorated boxes

```
$linkNode = $doc->createElement("a");
```

```
$linkNode->setAttribute("xlink:href", "javascript:void(0)");
```

```
$linkNode->setAttribute("onclick", "wikiportal_assays(this, \"\" . $gene_symbol[\"gene_symbol\"] . \"\");");
```

3.5. Save To SVG Files

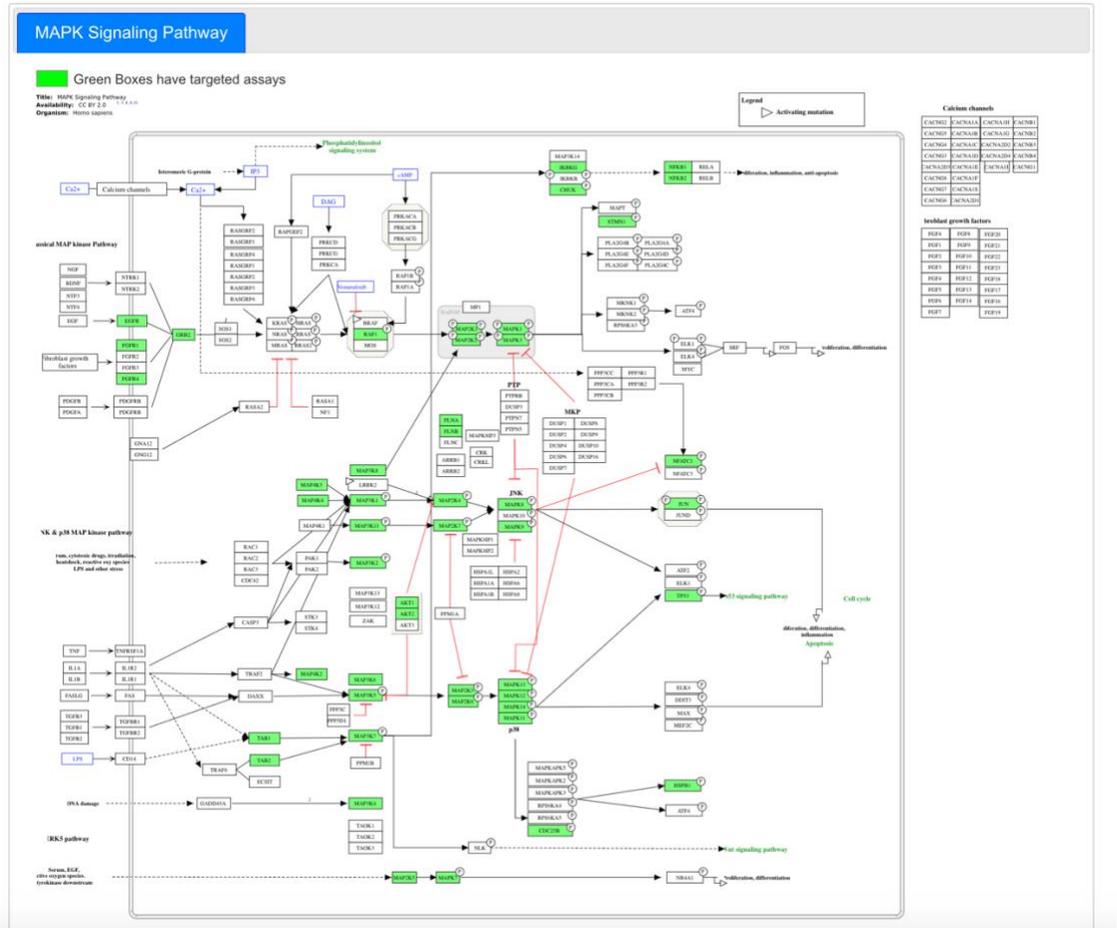
4. Display

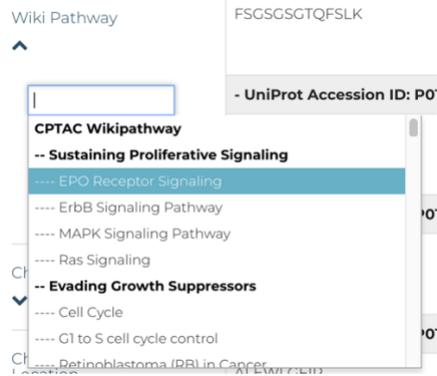
4.1. Implement server-side functions

- API endpoint lists of WikiPathway: Id, Name
- API endpoint response decorated SVG file content
- API endpoint response list of related assays

4.2. UI Design

- Display area for WikiPathways





4.3. Implement Search Filter functions

- Async call to get SVG file content
- Call D3 function to display SVG file content on display area

4.4. Implement wikipathways_assays function

- Async call get all related assay by gene name
- Display list of assays on modal box

Green Boxes have targeted assays

MAP3K8 - Mitogen-activated protein kinase kinase kinase 8

Portal ID	Peptide Sequence	Modification Type	Protein - Site of Modification	Assay Type	Matrix
CPTAC-858	IEASLER	unmodified	null	direct undefined	Pooled patient derived xenograft breast tumor digest
CPTAC-859	NIGSDFIPR	unmodified	null	direct undefined	Pooled patient derived xenograft breast tumor digest

Close