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9/2/2010
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   10
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  title="Clusters of related proteins from prokaryotes and organelles">Protein
  Clusters</a><a href="/guide/homology/">All Homology
  Resources...</a><a href="#">Small Molecules</a><ul
  class="actual-resources-submenu small-molecules"><a href="/pcassay"</pre>
  title="Contributed bioactivity data for PubChem Substances">PubChem
  BioAssay</a><a href="/pccompound" title="Unique, standardized chemical"
  structures">PubChem Compound</a><a
  href="http://pubchem.ncbi.nlm.nih.gov/search/search.cgi" title="Searches PubChem
  Compound by chemical structure">PubChem Structure Search</a><a
  href="/pcsubstance" title="Provides information on the biological activities of
  small molecules.">PubChem Substance</a><a href="/quide/small-
  molecules/">All Small Molecules Resources...</a><a
  href="#">Variation</a><a
  href="/dbvar" title="A database of genomic structural variation">Database of
  Genomic Structural Variation (dbVar)</a><a href="/gap"
  title="Genotype/Phenotype association studies">Database of Genotypes and
  Phenotypes (dbGaP) </a> <a href="/snp" title="Database of nucleotide"
  sequence polymorphisms">Database of Single Nucleotide Polymorphisms
  (dbSNP)</a>a href="http://www.ncbi.nlm.nih.gov/projects/SNP" title="The
  SNP database tools page provides links to the general submission guidelines and
  to the submission handle request.">SNP Submission Tool</a><a
  href="/quide/variation/">All Variation Resources...</a>
  id="all-howtos-menu" class="topmenu ui-helper-reset ui-ncbimenu-item-first"><a</pre>
  class="ui-ncbimenu-first-link-has-submenu ui-ncbimenu-link-first topanchor"
  href="#">How To</a><a href="/quide/all/howto/">All How
  To</a>a href="/guide/literature/howto/">Literature</a>a
  href="/guide/dna-rna/howto/">DNA & RNA</a><a</pre>
  href="/quide/proteins/howto/">Proteins</a><a href="/quide/sequence-
  analysis/howto/">Sequence Analysis</a><a href="/guide/genes-
  expression/howto/">Genes & amp; Expression</a><a href="/quide/genomes-
  maps/howto/">Genomes & amp; Maps</a><a href="/quide/domains-
  structures/howto/">Domains & Structures</a><a href="/guide/genetics-
  medicine/howto/">Genetics & Medicine</a><a</pre>
  href="/guide/taxonomy/howto/">Taxonomy</a><a href="/guide/data-
  software/howto/">Data & Software</a><a href="/guide/training-
  tutorials/howto/">Training & Tutorials</a><a
  href="/quide/homology/howto/">Homology</a><a href="/quide/small-</pre>
  molecules/howto/">Small Molecules</a><a
  href="/guide/variation/howto/">Variation</a>
  class="offscreen noflow ui-ncbimenu-item-skip access"><a href="#maincontent"</pre>
  title="Skip to the content" tabindex="0" accesskey="3">Skip to main
                 content</a>
133
  access"><a href="#navcontent" title="Skip to the navigation" tabindex="0"
  accesskey="4">Skip to
                 navigation</a><li class="offscreen noflow ui-ncbimenu-item-
134
  skip access"><a href="/sites/myncbi/about/accesskeys" title="About My NCBI
  Accesskeys" tabindex="0" accesskey="0">About NCBI Accesskeys</a><div
  class="myncbi"><a href="/sites/myncbi/" title="My NCBI" id="myncbiusername"</pre>
  style="display: none;"></a><a href="/sites/myncbi/" title="My NCBI">My NCBI</a><a
```

```
href="/sites/myncbi/" title="Sign in" id="sign in">Sign In</a><a</pre>
   href="/sites/myncbi/signout/" title="Sign Out" id="sign out" style="display:
   none;">Sign Out</a><script type="text/javascript">
135 | var c = jQuery.cookie('WebCubbyUser'); lre = /.*logged-in\=(\w*);.*/; ure =
   /.*my-name = (w*);.*/;
136 | if(c) \{ l = lre.exec(c); if(l[1] === 'true') \{ u = ure.exec(c); \}
   jQuery("#myncbiusername").text(u[1]).show(); jQuery("#sign in").hide();
   jQuery("#sign out").show(); } }
               </script></div></div>
137
138
       <div class="header">
139
       <!-- logo -->
140
       <div class="res logo">
141
           <h1 class="res name"><a href="/gene">Entrez Gene</a></h1>
142
           <h2 class="res tagline">Genes and mapped phenotypes</h2>
143
   </div>
144
       <!-- SearchBar -->
145
       <div class="search"><span class="tr"></span></span></pan>
146
   class="br"><span class="bl"></span></span><span class="tr2"></span><div</pre>
   class="search top"><label for="search term">Search:</label><select</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene SearchBar.SearchResourceList" sid="1"
   id="database"><option value="/sites/gquery" resource="gquery">All
   Databases
   resource="pubmed">PubMed</option><option value="/protein"
   resource="protein">Protein</option><option value="/nuccore"
   resource="nuccore">Nucleotide</option><option value="/nucgss"
   resource="nucgss">GSS</option><option value="/nucest"</pre>
   resource="nucest">EST</option><option value="/sites/entrez?db=structure"</pre>
   resource="structure">Structure</option><option value="/sites/entrez?db=genome"
   resource="genome">Genome</option><option value="/biosystems"
   resource="biosystems">BioSystems</option><option value="/books"
   resource="books">Books</option><option value="/cancerchromosomes"
   resource="cancerchromosomes">CancerChromosomes</option><option value="/cdd"
   resource="cdd">Conserved Domains</option><option value="/gap"
   resource="gap">dbGaP</option><option value="/dbvar"</pre>
   resource="dbvar">dbVar</option><option value="/domains" resource="domains">3D
   Domains
   resource="epigenomics">Epigenomics</option><option selected="selected"
   value="gene" resource="gene">Gene</option><option value="/genomeprj"
   resource="genomeprj">Genome Project</option><option value="/sites/entrez?</pre>
   db=gensat" resource="gensat">GENSAT</option><option value="/sites/entrez?db=geo"
   resource="geo">GEO Profiles</option><option value="/gds" resource="gds">GEO
   DataSetsoption value="/homologene"
   resource="homologene">HomoloGene</option><option value="/journals"
   resource="journals">Journals</option><option value="/mesh"
   resource="mesh">MeSH</option><option value="/ncbisearch"</pre>
   resource="ncbisearch">NCBI Web Site</option><option value="/nlmcatalog"
   resource="nlmcatalog">NLM Catalog</option><option value="/omia"
   resource="omia">OMIA/option><option value="/omim"</pre>
   resource="omim">OMIMoption><option value="/pepdome"</pre>
   resource="pepdome">Peptidome</option><option value="/pmc"
   resource="pmc">PMC</option><option value="/popset"</pre>
   resource="popset">PopSet</option><option value="/probe"</pre>
   resource="probe">Probe</option><option value="/proteinclusters"
   resource="proteinclusters">Protein Clustersoption value="/pcassay"
   resource="pcassay">PubChem BioAssay</option><option value="/pccompound"
   resource="pccompound">PubChem Compound</option><option value="/pcsubstance"
```

```
resource="pcsubstance">PubChem Substance</option><option value="/snp"
   resource="snp">SNP</option><option value="/sra"</pre>
   resource="sra">SRA</option><option value="/taxonomy"</pre>
   resource="taxonomy">Taxonomy</option><option value="/toolkit"
   resource="toolkit">ToolKit</option><option value="/toolkitall"
   resource="toolkitall">ToolKitAll</option><option value="/uniqene"
   resource="unigene">UniGene</option><option value="/unists"</pre>
   resource="unists">UniSTS</option></select></div><div class="search bottom"><input
   name="EntrezSystem2.PEntrez.Gene.Gene SearchBar.Term" sid="1" type="text"
   id="search term" value="" title="Search Gene" cmd="Go" class="jig-
   ncbiautocomplete"
   config="isEnabled:false, disableUrl:'EntrezSearchBarAutoComplCtrl'"
   autocomplete="off" suggest="true" /><button</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene SearchBar.Search" sid="1" id="search"
   class="button search" cmd="go">Search</button><button</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene SearchBar.Clear" sid="1" id="Clear"
   class="button clear">Clear</button></div><div class="search extras"><ul
   class="inline list"><a</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene SearchBar.LimitsLink" sid="1"
   onclick="return false;" href="/gene/limits"
   id="EntrezSystem2.PEntrez.Gene.Gene SearchBar.LimitsLink">Limits</a><a
   name="EntrezSystem2.PEntrez.Gene.Gene SearchBar.Advanced" sid="1" onclick="return
   false;" href="/gene/advanced"
   id="EntrezSystem2.PEntrez.Gene.Gene SearchBar.Advanced">Advanced
   search</a><a name="Help"</pre>
   href="http://www.ncbi.nlm.nih.gov/bookshelf/br.fcgi?
   book=helpgene&part=EntrezGene" target=" blank"
   id="Help">Help</a><div id="rss menu" class="rss menu
   tabPopper"><fieldset><legend>RSS Settings</legend><span>Search:
   </span><label for="rss results">Number of items
   displayed:</label><select
   name="EntrezSystem2.PEntrez.Gene.Gene SearchBar.FeedLimit" sid="1"
   id="rss results"><option>5</option><option>10</option><option
   selected="selected">15</option><option>20</option><option>50</option><option>100
   /option></select><label for="rss name">Feed name:</label><input
   name="EntrezSystem2.PEntrez.Gene.Gene SearchBar.FeedName" sid="1" type="text"
   id="rss name" value="" size="30" /><button class="button apply"</pre>
   type="submit" sid="1"
   name="EntrezSystem2.PEntrez.Gene.Gene SearchBar.CreateRssFeed"
   id="rss createfeed" qk="2" hid="1HeuMR3FLB500P621DCdYH2ctNS-
   TACnQ5q8PII8TNAEX5ATQgGyFXfck5Zqgq5-dFtJfe8zGBU">Create
   RSS</button></fieldset></div></div><input
   name="EntrezSystem2.PEntrez.Gene.Gene SearchBar.CurrDb" sid="1" type="hidden"
   value="gene" /><script type="text/javascript">
                           var d = document.getElementById('search term');
147
                           if (d) {d.focus();}
148
                   </script></div>
149
  </div>
150
       <input
   name="EntrezSystem2.PEntrez.Gene.Entrez PageController.PreviousPageName" sid="1"
   type="hidden" value="results" />
       <div class="2col">
152
       <div class="container">
153
           <div id="maincontent" class="content">
154
               <div class="results settings one setting"><h4 class="left"</pre>
155
   display settings content header jig-ncbipopper" id="display set"
   config="targetPosition : 'bottom center', sourcePosition : 'top
```

```
center', sourceSelector : '#display settings menu',
                                                                  hasArrow:
   false,openMethod : 'click',closeMethod : 'click',isSourceElementCloseClick:
   false,addCloseButton : true,
                                             multipleHandlesSelector:'#display set ~
   ul.display settings a', groupName: 'entrez pg'"><a href="#"
   class="dd dark closed">Display Settings:</a></h4>
   display settings"><a
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.Display"
   sid="2" href="#" sourceContent="display settings menu"
   id="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.Display">Full
   Report</a><div id="display settings menu" class="disp settings
   tabPopper"><fieldset class="format"><legend>Format</legend><ul
   class="column list"><input type="radio"</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.sPresentation"
   sid="1" value="full report" format="" id="full report" checked="true" /><label</pre>
   for="full report">Full Report</label><input type="radio"</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.sPresentation"
   sid="2" value="full report" format="text" id="full reporttext" /><label</pre>
   for="full reporttext">Full Report (text)</label><iiput type="radio"</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.sPresentation"
   sid="3" value="gene table" format="" id="gene table" /><label</pre>
   for="gene table">Gene Table</label><input type="radio"</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.sPresentation"
   sid="4" value="GeneRif" format="" id="GeneRif" /><label</pre>
   for="GeneRif">GeneRif</label><input type="radio"</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.sPresentation"
   sid="5" value="DocSum" format="" id="DocSum" /><label</pre>
   for="DocSum">Summary</label><input type="radio"</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.sPresentation"
   sid="6" value="DocSum" format="text" id="DocSumtext" /><label</pre>
   for="DocSumtext">Summary (text)</label><input type="radio"</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.sPresentation"
   sid="7" value="Brief" format="" id="Brief" /><label</pre>
   for="Brief">Brief</label><input type="radio"</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.sPresentation"
   sid="8" value="Brief" format="text" id="Brieftext" /><label for="Brieftext">Brief
   (text)</label><input type="radio"</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.sPresentation"
   sid="9" value="ASN1" format="text" id="ASN1text" /><label</pre>
   for="ASN1text">ASN.1</label><input type="radio"</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.sPresentation"
   sid="10" value="XML" format="text" id="XMLtext" /><label</pre>
   for="XMLtext">XML</label><input type="radio"</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.sPresentation"
   sid="11" value="uilist" format="text" id="uilisttext" /><label</pre>
   for="uilisttext">UI List</label></fieldset><button</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.SetDisplay"
   sid="1" class="button apply ncbipopper-close-button">Apply</button></div><h4</pre>
   class="content header send to align right jig-ncbipopper" id="sendto"
   config="targetPosition:'bottom center', sourcePosition : 'top
   center',sourceSelector : '#send to menu', hasArrow : false,
   openMethod : 'click', closeMethod : 'click', isSourceElementCloseClick: false,
   addCloseButton:true, groupName: 'entrez pg'"><a href="#"</pre>
   sourceContent="send to menu" class="dd dark closed">Send to:</a><script
   type="text/javascript">
                           jQuery(document).ready( function () {
156
                               jQuery("#send to menu input[type='radio']").click(
157
   function () {
```

```
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                                                                      view-source:http://www.ncbi.nlm.nih.g...
                                                                                       var selectedValue =
   158
          jQuery(this).val().toLowerCase();
                                                                                       var selectedDiv = jQuery("#send to menu div." +
   159
          selectedValue);
   160
                                                                                       if(selectedDiv.is(":hidden")){
   161
                                                                                       jQuery("#send to menu
   162
          div.submenu:visible").slideUp();
                                                                                       selectedDiv.slideDown();
   163
   164
                                                                             });
   165
   166
                                                                    });
   167
   168
                                                                   jQuery("#sendto").bind("ncbipopperclose", function(){
   169
                                                                             jQuery("#send to menu
   170
          div.submenu:visible").css("display", "none");
                                                                             jQuery("#send to menu
   171
          input[type='radio']:checked").attr("checked", false);
                                                                    });
   172
   173
                                                          </script></h4><div id="send to menu" class="tabPopper
   174
          send to"><fieldset><legend>Choose Destination</legend><ul
          class="column list"><input type="radio"</pre>
          name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.SendTo"
          sid="1" value="File" id="dest File" /><label</pre>
          for="dest File">File</label><input type="radio"</pre>
          name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.SendTo"
          sid="2" value="AddToClipboard" id="dest AddToClipboard" /><label</pre>
          for="dest AddToClipboard">Clipboard</label>input type="radio"
          name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.SendTo"
          sid="3" value="AddToCollections" id="dest AddToCollections" /><label</pre>
          for="dest AddToCollections">Collections</label></fieldset><div</pre>
          class="submenu file" id="submenu File" style="display: none;">class="submenu file" style="display: none;">class="submenu file" style="display: none;">class="submenu file" style="display: none;">class="submenu file" style="submenu file" s
          id="submenu File hint" class="hidden"><label
          for="file format">Format</label><select id="file format"</pre>
          name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.FFormat"
          sid="1"><option value="full report" format="text" selected="selected">Full Report
           (text) </option >< option value="DocSum" format="text" > Summary
           (text) </option >< option value = "Brief" format = "text" > Brief (text) </option >< option
          value="ASN1" format="text">ASN.1/option><option value="XML"</pre>
          format="text">XML</option><option value="uilist" format="text">UI
          List</option></select><button
          name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.SendToSubmit"
          sid="1" class="button apply file ncbipopper-close-button" type="submit"
          cmd="File">Create File/div><div class="submenu addtoclipboard"</pre>
          id="submenu AddToClipboard" style="display: none;"><p</pre>
          id="submenu AddToClipboard hint" class="hidden"><button
          name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.SendToSubmit"
          sid="2" class="button apply clipboard ncbipopper-close-button" type="submit"
          cmd="AddToClipboard">Add to Clipboard</button></div><div class="submenu">cmd="AddToClipboard">Add to Clipboard</br/>/button></div><div class="submenu">cmd="AddToClipboard">Add to Clipboard</br/>/button></div><div class="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submenu">cmd="submen
          addtocollections" id="submenu AddToCollections" style="display: none;"><p
          id="submenu AddToCollections hint" class="hidden"><button
          name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.SendToSubmit"
          sid="3" class="button apply collections ncbipopper-close-button" type="submit"
          cmd="AddToCollections">Add to Collections/div></div><div><input</pre>
          name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.FileFormat"
```

```
sid="1" type="hidden" value="full report" /><input</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.LastPresentati
   on" sid="1" type="hidden" value="full report" /><input
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.Presentation"
   sid="1" type="hidden" value="full report" /><input</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.PageSize"
   sid="1" type="hidden" value="20" /><input</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.LastPageSize"
   sid="1" type="hidden" value="20" /><input</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.Sort" sid="1"
   type="hidden" value="" /><input
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.LastSort"
   sid="1" type="hidden" value="" /><input</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.FileSort"
   sid="1" type="hidden" value="" /><input</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.Format"
   sid="1" type="hidden" value="" /><input</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene DisplayBar.LastFormat"
   sid="1" type="hidden" value="" /></div></div></div>
                <div id="messagearea" class="empty">
175
                    'd="msgportlet" class="messages">
176
177
                    <div></div>
178
                </div>
179
                <div class="">
180
181
182
                    <div><h2 class="result count"></h2><span id="result sel"</pre>
   class="nowrap"></span><input</pre>
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Entrez ResultsController.Resul
   tCount" sid="1" type="hidden" value="1" /><input
   name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Entrez ResultsController.RunLa
   stQuery" sid="1" type="hidden" /></div>
                </div>
183
                <div class="rprt full-rprt">
184
           <a id="pageTop"></a><div class="rprt-header">
185
     <h1 class="title"><span class="gn">Agp2</span> aquaporin 2 (collecting duct) [
186
   <em class="tax">Rattus norvegicus</em> ]
                                     </h1>
187
188
     <span class="geneid">Gene ID: 25386</span>
     <span>,
189
                                              updated on 31-Aug-2010</span>
190
   </div>
191
192
           <div class="rprt-body">
193
                    <div class="rprt-section gene-Summary">
194
     <a id="geneSummary"></a>
195
     <div class="tophelp">
196
       <a href="/bookshelf/br.fcgi?</pre>
197
   book=helpgene&part=EntrezGene#EntrezGene.Summary 2" title="Help"
   class="genefullhelp">
         <span>Help</span>
198
199
       <a href="#pageTop" title="Go to the top of the page" class="genefulltop">
200
         <span>top of page</span>
201
       </a>
202
     </dim>
203
     <h2 class="secttitle">
```

```
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                                view-source:http://www.ncbi.nlm.nih.g...
         <a class="jig-ncbitoggler-open">
 205
           <span class="ui-ncbitoggler-master-text">Summary</span>
 206
         </a>
 207
       </h2>
 208
       <div class="rprt-section-body">
 209
         <div id="summaryDiv" class="section">
 210
           <dl id="summaryD1">
 211
             <dt class="noline"> Official
 212
                                Symbol</dt>
 213
             <dd class="noline">Aqp2<span class="prov">provided by <a</pre>
 214
     href="http://rgd.mcw.edu/nomen/nomen.shtml" target=" blank" title="Rat Genome
     Database">RGD</a></span></dd>
             <dt> Official
 215
                                Full Name</dt>
 216
             <dd>aquaporin 2 (collecting duct) < span class="prov" > provided by <a</pre>
 217
     href="http://rgd.mcw.edu/nomen/nomen.shtml" target=" blank" title="Rat Genome
     Database">RGD</a></span></dd>
             <dt>Primary source</dt>
 218
             < dd >
 219
                <a href="http://rgd.mcw.edu/generalSearch/RgdSearch.jsp?</pre>
 220
     quickSearch=1& searchKeyword=2142">RGD:2142</a>
             </dd>
 221
             <dt>See related</dt>
 222
             <dd>
 223
                <a href="http://www.ensembl.org/Rattus norvegicus/geneview?"</pre>
 224
     gene=ENSRNOG00000000297">Ensembl:ENSRNOG0000000297;</a>
 225
                <a href="http://ratmap.gen.gu.se/ShowSingleLocus.htm?"</pre>
     accno=41271">RATMAP:41271</a>
             </dd>
 226
             <dt>Gene type</dt>
 227
             <dd>protein coding</dd>
 228
             <dt>RefSeg status</dt>
 229
             <dd>PROVISIONAL</dd>
 230
             <dt>Organism</dt>
 231
             <dd class="tax">
 232
                <a href="http://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?"</pre>
 233
     id=10116">Rattus norvegicus</a>
             </dd>
 234
 235
             <dt>Lineage</dt>
             <dd class="tax">Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 236
     Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
     Sciurognathi; Muroidea; Muridae; Murinae; Rattus</dd>
             <dt>Also known as</dt>
 237
             <dd>AQP-2; MGC156502; aguaporin-2; Agp2</dd>
 238
             <dt>Summary</dt>
 239
             <dd>water channel protein involved in water reabsorption and vasopressin
 240
     regulation in kidney collecting duct cells; mutation is linked to nephrogenic
     diabetes insipidous (NDI) [RGD] < /dd>
           </dl>
 241
         </div>
 242
       </div>
 243
     </div>
 244
 245
                      <div class="rprt-section gene-GenomicProduct">
 246
       <a id="geneGenomic regions, transcripts, and products"></a>
 247
       <div class="tophelp">
 248
         <a href="/bookshelf/br.fcgi?</pre>
 249
```

```
book=helpgene&part=EntrezGene#EntrezGene.Genomic Regions Transcripts a"
   title="Help" class="genefullhelp">
         <span>Help</span>
250
       </a>
251
       <a href="#pageTop" title="Go to the top of the page" class="genefulltop">
252
         <span>top of page</span>
253
       </a>
254
     </div>
255
     <h2 class="secttitle">
256
       <a class="jig-ncbitoggler-open">
257
         <span class="ui-ncbitoggler-master-text">Genomic regions, transcripts, and
258
   products</span>
       </a>
259
     </h2>
260
     <div class="rprt-section-body">
261
       <div>
262
         (plus) Go to <a href="#geneReference sequences">reference
263
   sequence details</a>
         264
           <a href="/nuccore/NC 005106.2?
265
   from=138325604&to=138331142&report=graph&content=5">Go to nucleotide
   graphics</a>
         266
       </div>
267
       <div id="seq-viewer">
268
         <iframe src="/projects/sviewer/embedded iframe.html?</pre>
269
   embedded=minimal&noslider=1&id=NC 005106.2&from=138325604&to=1383
   31142" frameBorder="0">
           >
270
             <a href="/nuccore/NC 005106.2?
271
   from=138325604&to=138331142&report=graph&content=5">Try our new
   Sequence Viewer</a>
           272
         </iframe>
273
       </div>
274
     </div>
275
   </div>
276
277
278
                   <div class="rprt-section gene-GenomicContext">
     <a id="geneGenomic context"></a>
279
     <div class="tophelp">
280
       <a href="/bookshelf/br.fcgi?</pre>
281
   book=helpgene&part=EntrezGene#EntrezGene.Genomic Context" title="Help"
   class="genefullhelp">
         <span>Help</span>
282
283
       <a href="#pageTop" title="Go to the top of the page" class="genefulltop">
284
         <span>top of page</span>
285
       </a>
286
     </div>
287
     <h2 class="secttitle">
288
       <a class="jig-ncbitoggler-open">
289
         <span class="ui-ncbitoggler-master-text">Genomic context</span>
290
       </a>
291
     </h2>
292
     <div class="rprt-section-body">
293
       <div>
294
```

```
9/2/2010
                            view-source:http://www.ncbi.nlm.nih.g...
          <strong>chromosome:</strong> 7; <strong>Location:
 295
    </strong>7q36
          296
            <a href="/mapview/map search.cgi?
 297
    direct=on&idtype=gene&id=25386">See Aqp2 in MapViewer</a>
 298
        </div>
 299
        <img usemap="#nbrMap25386 62750807" border="0"</pre>
 300
    alt="Genomic Context describing neighboring genes" src="/gutils/geneneighb.fcgi?
    geneid=25386&nuc gi=62750807&n0=Bcdin3d&n1=Faim2&n2=Aqp2&n3=A
    qp5&n4=Aqp6" /><map name="nbrMap25386 62750807" id="nbrMap25386 62750807">
    <area shape="rect" onMouseOver="showtip(this,event,'BCDIN3 domain containing')"</pre>
    onMouseOut="hidetip()" coords="27,23,77,31" alt="Neighboring gene BCDIN3 domain
    containing" href="/gene/363001" />
    <area shape="rect" onMouseOver="showtip(this,event,'Fas apoptotic inhibitory</pre>
    molecule 2')" onMouseOut="hidetip()" coords="113,23,210,31" alt="Neighboring gene
    Fas apoptotic inhibitory molecule 2" href="/gene/246274" />
 303 | <area shape="rect" onMouseOver="showtip(this, event, 'aquaporin 5')"
    onMouseOut="hidetip()" coords="367,35,399,43" alt="Neighboring gene aquaporin 5"
    href="/gene/25241" />
    <area shape="rect" onMouseOver="showtip(this, event, 'aquaporin 6, kidney</pre>
    specific') " onMouseOut="hidetip() " coords="393,23,423,31" alt="Neighboring gene
    aquaporin 6, kidney specific" href="/gene/29170" />
    </map>
 305
    306
      </div>
 307
 308
    </div>
 309
                    <div class="rprt-section gene-bibliography">
 310
            <a id="geneBibliography"></a><div class="tophelp"><a</pre>
 311
    href="/bookshelf/br.fcgi?
    book=helpgene&part=EntrezGene#EntrezGene.Bibliography" title="Help"
    class="genefullhelp"><span>Help</span></a><a href="#pageTop" title="Go to the top
    of the page" class="genefulltop"><span>top of page</span></a></div><h2
    class="secttitle"><a class="jig-ncbitoggler-open"><span class="ui-ncbitoggler-
    master-text">Bibliography</span></a></h2>
 312
            <div class="rprt-section-body">
 313
 314
                    <div class="generif-pubmed"><h3>Related articles in
 315
    PubMed</h3><div class="generefbl-link"><a
    href="/pubmed/20432437/">Adaptation to alkalosis induces cell cycle delay and
    apoptosis in cortical collecting duct cells: role of Aquaporin-2.</a> Rivarola V,
    <em>et al. J Cell Physiol, 2010 Aug. PMID 20432437.
    href="/pubmed/20130117/">Dehydration-induced increase in aquaporin-2 protein
    abundance is blocked by nonsteroidal anti-inflammatory drugs. </a> Baggaley E,
    <em>et alAm J Physiol Renal Physiol, 2010 Apr. PMID 20130117.
    href="/pubmed/20107111/">Cyclooxygenase 2 inhibition exacerbates AQP2 and pAQP2
    downregulation independently of V2 receptor abundance in the postobstructed
    kidney.</a> Jensen AM, <em>et al</em>. Am J Physiol Renal Physiol, 2010 Apr. PMID
    20107111.<a href="/pubmed/20089674/">Quantitative analysis of aquaporin-
    2 phosphorylation.</a> Xie L, <em>et al</em>. Am J Physiol Renal Physiol, 2010
    Apr. PMID 20089674.<a href="/pubmed/19794145/">FAPP2 is required for</a>
    aquaporin-2 apical sorting at trans-Golgi network in polarized MDCK cells.</a>
    Yui N, <em>et al</em>. Am J Physiol Cell Physiol, 2009 Dec. PMID
    19794145.19794145.class="see-all-pm"><a href="/gene?</td>
    Db=pubmed&DbFrom=gene&Cmd=Link&LinkName=gene pubmed&LinkReadableN
```

```
ame=PubMed& IdsFromResult=25386" title="See all 93 citations in Pubmed">See
   all (93) citations in PubMed</a></div></div>
316
                   <div class="generif-pubmed generif">
317
     <h3>GeneRIFs: Gene References Into Functions <a
318
   href="/projects/GeneRIF/GeneRIFhelp.html" class="whatisthis">What's a
   GeneRIF?</a></h3>
     319
       <1i>>
320
         <a href="/pubmed/20432437" target=" blank" class="jig-ncbipopper"</pre>
321
   config="closeAnimation: 'none', openAnimation : 'none', openMethod : 'mouseover',
   targetPosition : 'top right', sourcePosition : 'top left', sourceSelector :
   '#gene-popper1', hasArrow : true">AQP2 expression facilitates cell swelling or
   shrinkage leading to the activation of channels necessary to the control of cell
   proliferatio and apoptosis.</a>
         <div id="gene-popper1" class="gene-rif-popper">Title: Adaptation to
322
   alkalosis induces cell cycle delay and apoptosis in cortical collecting duct
   cells: role of Aquaporin-2.</div>
       323
       <1i>>
324
         <a href="/pubmed/19040709" target=" blank" class="jig-ncbipopper"</pre>
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   '#gene-popper2', hasArrow : true">Upregulation of AQP2 expression is maintained
   dependent upon non-suppressible release of arginine vasopressin in rats with
   glucocorticoid deficiency. AQP2 plays a crucial role in impairment of water
   excretion in aged rats with glucocorticoid deficiency.</a>
         <div id="gene-popper2" class="gene-rif-popper">Title: Vasopressin-dependent
326
   upregulation of aquaporin-2 gene expression in aged rats with glucocorticoid
   deficiency.</div>
       327
       <1i>>
328
         <a href="/pubmed/20130117" target=" blank" class="jig-ncbipopper"</pre>
329
   config="closeAnimation: 'none', openAnimation : 'none', openMethod : 'mouseover',
   targetPosition : 'top right', sourcePosition : 'top left', sourceSelector :
   '#gene-popper3', hasArrow : true">These results demonstrate that NSAIDs decrease
   AQP2 protein abundance, particularly during adaptation during dehydration.</a>
         <div id="gene-popper3" class="gene-rif-popper">Title: Dehydration-induced
330
   increase in aquaporin-2 protein abundance is blocked by nonsteroidal anti-
   inflammatory drugs.</div>
       331
       <1i>>
332
         <a href="/pubmed/20107111" target=" blank" class="jig-ncbipopper"</pre>
333
   config="closeAnimation: 'none', openAnimation : 'none', openMethod : 'mouseover',
   targetPosition : 'top right', sourcePosition : 'top left', sourceSelector :
   '#gene-popper4', hasArrow : true">The results indicate that COX-2 inhibition does
   not mimic ANG II receptor (AT1R) blockade-mediated effects and that AT1R-mediated
   AQP2 regulation in the postobstructed kidney collecting duct is independent of
   COX-2 induction.</a>
         <div id="gene-popper4" class="gene-rif-popper">Title: Cyclooxygenase 2
334
   inhibition exacerbates AQP2 and pAQP2 downregulation independently of V2 receptor
   abundance in the postobstructed kidney.</div>
       335
       <1i>>
336
         <a href="/pubmed/20089674" target=" blank" class="jig-ncbipopper"</pre>
337
   config="closeAnimation: 'none', openAnimation : 'none', openMethod : 'mouseover',
   targetPosition : 'top right', sourcePosition : 'top left', sourceSelector :
```

```
'#gene-popper5', hasArrow : true">These studies suggest that Ser269
   phosphorylation may be a more consistent indicator of vasopressin action and AQP2
   membrane abundance than is Ser256 phosphorylation.</a>
         <div id="gene-popper5" class="gene-rif-popper">Title: Quantitative analysis
338
   of aquaporin-2 phosphorylation.</div>
       339
       <1i>>
340
         <a href="/pubmed/18419953" target=" blank" class="jig-ncbipopper"</pre>
341
   config="closeAnimation: 'none', openAnimation : 'none', openMethod : 'mouseover',
   targetPosition : 'top right', sourcePosition : 'top left', sourceSelector :
   '#gene-popper6', hasArrow : true">Circulatory arrest led to down regulation of
   renal AQP2 expression.</a>
         <div id="gene-popper6" class="gene-rif-popper">Title: [Expression of renal
342
   aquaporin 2 after circulatory arrest]</div>
       343
       <1i>>
344
         <a href="/pubmed/19794145" target=" blank" class="jig-ncbipopper"</pre>
345
   config="closeAnimation: 'none', openAnimation : 'none', openMethod : 'mouseover',
   targetPosition : 'top right', sourcePosition : 'top left', sourceSelector :
   '#gene-popper7', hasArrow : true">FAPP2 is necessary to generate AQP2-bearing
   vesicles at trans-Golgi that will undergo phosphorylation by protein kinase A in
   subapical regions.</a>
         <div id="gene-popper7" class="gene-rif-popper">Title: FAPP2 is required for
346
   aquaporin-2 apical sorting at trans-Golgi network in polarized MDCK cells.</div>
       347
       <1i>>
348
         <a href="/pubmed/19776175" target=" blank" class="jig-ncbipopper"</pre>
349
   config="closeAnimation: 'none', openAnimation : 'none', openMethod : 'mouseover',
   targetPosition : 'top right', sourcePosition : 'top left', sourceSelector :
   '#gene-popper8', hasArrow : true">Increased abundance of inner medulla aquaporin-
   2 (AQP2) and AQP2 phosphorylated at Ser(256) (p-AQP2) in heart failure.</a>
         <div id="gene-popper8" class="gene-rif-popper">Title: Changes of renal
350
   AQP2, ENaC, and NHE3 in experimentally induced heart failure: response to
   angiotensin II AT1 receptor blockade.</div>
       351
       <1i>>
352
         <a href="/pubmed/19300448" target=" blank" class="jig-ncbipopper"</pre>
353
   config="closeAnimation: 'none', openAnimation : 'none', openMethod : 'mouseover',
   targetPosition: 'top right', sourcePosition: 'top left', sourceSelector:
   '#gene-popper9', hasArrow : true">AQP2 translocation is largely decreased by
   metabolic acidosis even with increased expression in the collecting ducts.</a>
         <div id="gene-popper9" class="gene-rif-popper">Title: Acute and chronic
354
   metabolic acidosis interferes with aquaporin-2 translocation in the rat kidney
   collecting ducts.</div>
       355
       <1i>>
356
         <a href="/pubmed/19656910" target=" blank" class="jig-ncbipopper"</pre>
357
   config="closeAnimation: 'none', openAnimation : 'none', openMethod : 'mouseover',
   targetPosition : 'top right', sourcePosition : 'top left', sourceSelector :
   '#gene-popper10', hasArrow : true">In sirolimus-treated animals, AQP2 expression
   was reduced and expression of TRPM6 was increased.</a>
         <div id="gene-popper10" class="gene-rif-popper">Title: Rosiglitazone
358
   prevents sirolimus-induced hypomagnesemia, hypokalemia, and downregulation of
   NKCC2 protein expression.</div>
       359
     360
     <div class="submit-genrif">
```

```
9/2/2010
                         view-source:http://www.ncbi.nlm.nih.g...
       <span>Submit:</span>
 362
       <a href="/projects/GeneRIF/GeneRIF.cgi?</pre>
 363
   lid=25386&sym=Aqp2&name=aquaporin 2 (collecting duct)&org=Rattus
   norvegicus&url=/gene/25386">New GeneRIF</a>
       <a href="/RefSeq/update.cgi?</pre>
 364
   geneid=25386&symbol=Aqp2;task=fixpub">Correction</a>
       <a href="?db=gene&amp;report=GeneRif&amp;term=25386" class="seeall-</pre>
 365
   generif">See all (63)</a>
     </div>
 366
   </div>
 367
 368
          </div>
 369
   </div>
 370
 371
 372
 373
                 <div class="rprt-section gene-interactions">
 374
     <a id="geneInteractions"></a>
 375
     <div class="tophelp">
 376
       <a href="/bookshelf/br.fcgi?</pre>
 377
   book=helpgene&part=EntrezGene#EntrezGene.Interactions" title="Help"
   class="genefullhelp">
         <span>Help</span>
 378
       </a>
 379
       <a href="#pageTop" title="Go to the top of the page" class="genefulltop">
 380
         <span>top of page</span>
 381
 382
       </a>
     </div>
 383
     <h2 class="secttitle">
 384
       <a class="jig-ncbitoggler-open">
 385
         <span class="ui-ncbitoggler-master-text">Interactions</span>
 386
       </a>
 387
     </h2>
 388
     <div class="rprt-section-body">
 389
       <div>
 390
         391
    config="isPagable:true, pageSize:25">
          <thead>
 392
 393
            \langle t.r \rangle
              Product
 394
              Interactant
 395
              Other Gene
 396
              Complex
 397
              Source
 398
              Pubs
 399
              Description
 400
            401
          </thead>
 402
          403
            404
              NP 037041.1
 405
              406
               <a href="/protein/13592133">NP 112406.1</a>
 407
              408
              <a href="/gene/81822">Actb</a> 
 409
              <a href=""></a> 
 410
              <a href="http://bind.ca/Action?</pre>
```

```
9/2/2010
                              view-source:http://www.ncbi.nlm.nih.g...
    idsearch=183539">BIND</a> 
                 412
                   <a title="PubMed ID 15336526" href="/pubmed/15336526">PubMed</a>
 413
                 414
                 AQP2 interacts with beta-actin. 
 415
 416
             417
           418
        </div>
 419
      </div>
 420
    </div>
 421
 422
                     <div class="rprt-section gene-homologyinfo">
 423
             <a id="geneGeneral gene info"></a><div class="tophelp">
 424
      <a href="/bookshelf/br.fcgi?</pre>
 425
    book=helpgene&part=EntrezGene#EntrezGene.General Gene Information"
    title="Help" class="genefullhelp">
        <span>Help</span>
 426
      </a>
 427
      <a href="#pageTop" title="Go to the top of the page" class="genefulltop">
 428
        <span>top of page</span>
 429
      </a>
 430
    </div><h2 class="secttitle">
 431
      <a class="jig-ncbitoggler-open">
 432
        <span class="ui-ncbitoggler-master-text">General gene information/span>
 433
      </a>
 434
    </h2>
 435
 436
             <div class="rprt-section-body">
 437
                     <div class="gene-markers infosec">
 438
      <a id="geneMarkers"></a>
 439
      <h3>Markers</h3>
 440
      <11>
 441
        <dt><strong>RH94449</strong> (e-PCR)</dt>
 442
        <dd> Links:
 443
                             <a href="http://www.ncbi.nlm.nih.gov/genome/sts/sts.cgi?"</pre>
 444
    uid=119697">UniSTS:119697</a></dd>
        <dt><strong>Aqp2</strong> (e-PCR), detects polymorphism</dt>
 445
 446
        <dd> Links:
                             <a href="http://www.ncbi.nlm.nih.gov/genome/sts/sts.cgi?"</pre>
 447
    uid=209563">UniSTS:209563</a></dd>
        <dt><strong>RH134997</strong> (e-PCR)</dt>
 448
        <dd> Links:
 449
                             <a href="http://www.ncbi.nlm.nih.gov/genome/sts/sts.cgi?"</pre>
 450
    uid=218274">UniSTS:218274</a></dd>
      </dl>
 451
    </div>
 452
 453
                     <div class="infosec">
 454
      <a id="genotypes"></a>
 455
      <h3>Genotypes</h3>
 456
      457
        <1i>>
 458
           <a href="http://www.ncbi.nlm.nih.gov/SNP/snp ref.cgi?locusId=25386">See
 459
    Aqp2 SNP
                                                                               Geneview
 460
```

Report

```
9/2/2010
                           view-source:http://www.ncbi.nlm.nih.g...
       461
       <1i>>
 462
         <a href="http://www.ncbi.nlm.nih.gov/SNP/CGI/genesnpview.cgi?
 463
    report=genotype&fromdb=gene&id=25386"> See Aqp2 SNP
                                                                       Genotype
 464
    Report </a>
       465
      </111>
 466
    </div>
 467
 468
 469
                   <div id="gengeneInfoPcontainer" class="geneportletcontainer">
 470
      <div id="gengeneCommentDiv" class="section"></div>
 471
    </div>
 472
 473
                   <div class="infosec">
 474
      <a id="homologys"></a>
 475
      <h3>Homology</h3>
 476
      477
       <1i><a href="/sites/homologene/20137">Homologs of the Agp2 gene</a>: The Agp2
 478
    gene is conserved in human, chimpanzee, dog, cow, mouse, A.thaliana, and
    rice.
       <a href="http://www.ncbi.nlm.nih.gov/mapview/maps.cgi?</pre>
 479
    taxid=10116&chr=7&MAPS=genes-r-org/human-chr/rat%3A7,genes-r-org/mouse-
    chr/rat%3A7, genes-r-org/rat-
    chr7&query=e%3A25386[egene id]+AND+gene[obj type]&QSTR=aqp2&cmd=focus
    & fill=10">Map Viewer</a> (Human, Mouse)
      480
    </div>
 481
 482
                   <div class="infosec">
 483
      <a id="geneinfo-pathways"></a>
 484
      <h3>Pathways</h3>
 485
      <dl class="pathway">
 486
       <dt>KEGG pathway: Vasopressin-regulated water reabsorption</dt>
 487
       < dd >
 488
         <a href="http://www.genome.jp/dbget-bin/show pathway?</pre>
 489
    rno04962+25386">04962</a>
 490
       </dd>
      </dl>
 491
    </div>
 492
 493
 494
                   <div class="infosec">
 495
      <a id="geneGene Ontology"></a>
 496
      <h3 class="withnote">Gene Ontology <span class="note"> provided by <a</pre>
 497
    target=" blank" href="http://www.ebi.ac.uk/GOA/">GOA</a></span></h3>
      <div class="geneinfo-subsec fgrid">
 498
       499
    isZebra:true">
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 500
           501
             Function
 502
             Evidence
 503
           504
           505
             Evidence Code
 506
```

```
9/2/2010
                   view-source:http://www.ncbi.nlm.nih.g...
         Pubs
507
        508
      </thead>
509
      510
        511
         512
          <a href="http://amigo.geneontology.org/cgi-bin/amigo/go.cgi?</pre>
513
   view=details&depth=1&query=30165">PDZ domain binding</a>
         514
          IPI
515
         <a</pre>
516
  href="/pubmed/15196935" target=" blank" title="PubMed ID 15196935">PubMed</a>
                  517
        518
        519
         520
          <a href="http://amigo.geneontology.org/cgi-bin/amigo/go.cgi?
521
  view=details&depth=1&query=3779">actin binding</a>
         522
          IDA
523
         <a
524
  href="/pubmed/15336526" target=" blank" title="PubMed ID 15336526">PubMed</a>
                  525
        526
        527
         528
529
          <a href="http://amigo.geneontology.org/cgi-bin/amigo/go.cgi?
  view=details&depth=1&query=15168">glycerol transmembrane transporter
  activity</a>
         530
          IEA
531
         532
                  533
        534
        535
         536
          <a href="http://amigo.geneontology.org/cgi-bin/amigo/go.cgi?</pre>
537
  view=details&depth=1&query=15168">glycerol transmembrane transporter
  activity</a>
         538
          ISO
539
         540
                  541
        542
        543
         544
          <a href="http://amigo.geneontology.org/cgi-bin/amigo/go.cgi?
545
  view=details&depth=1&query=5515">protein binding</a>
         </+d>
546
          IPI
547
         <a
548
  href="/pubmed/19209902" target=" blank" title="PubMed ID 19209902">PubMed</a>
                  549
        550
        551
         552
          <a href="http://amigo.geneontology.org/cgi-bin/amigo/go.cgi?</pre>
553
```

```
view-source:http://www.ncbi.nlm.nih.g...
9/2/2010
  view=details&depth=1&query=5215">transporter activity</a>
         554
          IEA
555
         556
                  557
       558
        559
         560
          <a href="http://amigo.geneontology.org/cgi-bin/amigo/go.cgi?
561
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    Genomes</h3>
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         These reference sequences exist independently of genome
    builds.
                                       <a href="#refseq-expl" id="expl-
1113
    refseq">Explain</a>
          These reference sequences are curated
1114
                          independently of the genome annotation cycle, so their
1115
    versions may not match the RefSeq
                          versions in the current genome build. Identify version
1116
    mismatches by comparing the
                          version of the RefSeq in this section to the one reported in
1117
                                       <a href="#geneGenomic regions, transcripts, and
1118
    products">Genomic regions, transcripts, and products</a>
1119
                          above. 
         <h4>mRNA and Protein(s) </h4>
1120
         1121
           <1i>>
1122
             p<a href="/nuccore/NM 012909.2">NM 012909.2</a> <math>\rightarrow a
1123
    href="/protein/NP 037041.2">NP 037041.2</a> aquaporin-2
1124
```

```
9/2/2010
                              view-source:http://www.ncbi.nlm.nih.g...
               <dt>Source sequence(s)</dt>
1125
               < dd >
1126
                 <a href="/sviewer/viewer.fcgi?</pre>
1127
    val=D13906& report=docsum">D13906</a>
              </dd>
1128
              <dt>UniProtKB/Swiss-Prot</dt>
1129
               <dd>
1130
                 <a href="/entrez/utils/fref.fcgi?</pre>
1131
    http://www.uniprot.org/entry/P34080">P34080</a>
              </dd>
1132
              <dt>Related Ensembl</dt>
1133
               <dd><a href="http://www.ensembl.org/Rattus norvegicus/geneview?"</pre>
1134
    gene=ENSRNOP00000000324">ENSRNOP0000000324</a>, <a
    href="http://www.ensembl.org/Rattus norvegicus/geneview?
    gene=ENSRNOT00000000324">ENSRNOT0000000324</a></dd>
              <dt class="clear"> Conserved Domains (1) <a</pre>
1135
    href="/Structure/cdd/wrpsb.cgi?seqinput=NP 037041.2">summary</a></dt>
1136
                 <dl class="level2">
1137
                   <dt><a href="/Structure/cdd/cddsrv.cgi?uid=29423">cd00333</a><br
1138
    /><span class="cddlocation">Location:</span><span class="cddfrom">11</span> -
    <span class="cddto">222</span><br /> Blast Score: <span</pre>
    class="cddscore">472</span></dt>
                   <dd class="clearfix"> MIP; Major intrinsic protein (MIP)
1139
    superfamily. Members of the MIP superfamily function as membrane channels that
    selectively transport water, small neutral molecules, and ions out of and between
    cells.</dd>
                 </dl>
1140
               </dd>
1141
            </d1>
1142
          1143
        1144
        <h3 class="genomerefsegs">RefSegs of Annotated Genomes: Build 4.2</h3>
1145
         The following sections contain reference sequences that
1146
    belong to a
                     specific genome build. <a id="expl-genomes"
1147
    href="#">Explain</a>
        This section includes genomic
1148
    Reference
                 Sequences (RefSeqs) from all assemblies on which this gene is
1149
    annotated, such as RefSeqs
                 for chromosomes and scaffolds (contigs) from both reference and
1150
    alternate assemblies.
                 Model RNAs and proteins are also reported here.
1151
        <h3>Reference assembly (based on RGSC v3.4)</h3>
1152
        <h4>Genomic </h4>
1153
        <01>
1154
           <1i>>
1155
              NC 005106.2 
1156
             <d1>
1157
              <dt>Range</dt>
1158
              <dd>138325854..138330890</dd>
1159
              <dt>Download</dt>
1160
              <dd>
1161
                 <a href="/nuccore/NC 005106.2?
1162
    & from=138325854& to=138330890& report=genbank">GenBank</a>
                 <a href="/nuccore/NC 005106.2?
1163
```

```
& from=138325854& to=138330890& report=fasta"> FASTA</a>
                <a href="/nuccore/NC 005106.2?
1164
    & from=138325854& to=138330890& report=graph" > Sequence Viewer
    (Graphics) </a>
              </dd>
1165
            </dl>
1166
          1167
          <1i>>
1168
             NW 047784.1 
1169
            <d1>
1170
              <dt>Range</dt>
1171
              <dd>5053840..5058876</dd>
1172
              <dt>Download</dt>
1173
              < dd >
1174
1175
                <a href="/nuccore/NW 047784.1?
    %amp; from=5053840%amp; to=5058876%amp; report=genbank">GenBank</a>
                <a href="/nuccore/NW 047784.1?</pre>
1176
    & from=5053840& to=5058876& report=fasta"> FASTA</a>
                <a href="/nuccore/NW 047784.1?
1177
    & from=5053840& to=5058876& report=graph" > Sequence Viewer
    (Graphics) </a>
              </dd>
1178
            </dl>
1179
          </1i>
1180
        1181
        <h3>Alternate assembly (Rn Celera) </h3>
1182
1183
        <h4>Genomic </h4>
        <01>
1184
          <1i>>
1185
             AC 000075.1 
1186
            <d1>
1187
              <dt>Range</dt>
1188
              <dd>127193025..127197995</dd>
1189
              <dt>Download</dt>
1190
              < dd >
1191
                <a href="/nuccore/AC 000075.1?
1192
    & from=127193025& to=127197995& report=genbank">GenBank</a>
                <a href="/nuccore/AC 000075.1?
1193
    & from=127193025& to=127197995& report=fasta"> FASTA</a>
                <a href="/nuccore/AC 000075.1?
1194
    & from=127193025& to=127197995& report=graph" > Sequence Viewer
    (Graphics) </a>
              </dd>
1195
            </dl>
1196
          1197
          <1i>>
1198
            NW 001084861.1 
1199
            <d1>
1200
              <dt>Range</dt>
1201
              <dd>4221700..4226670</dd>
1202
              <dt>Download</dt>
1203
              <dd>
1204
                <a href="/nuccore/NW 001084861.1?
1205
    & from=4221700& to=4226670& report=genbank">GenBank</a>
                <a href="/nuccore/NW 001084861.1?</pre>
1206
    & from=4221700& to=4226670& report=fasta"> FASTA</a>
                <a href="/nuccore/NW 001084861.1?</pre>
1207
```

```
& from=4221700& to=4226670& report=graph"> Sequence Viewer
   (Graphics) </a>
            </dd>
1208
          </dl>
1209
        1210
      1211
     </div>
1212
   </div>
1213
1214
                 <div class="rprt-section gene-relate-seg">
1215
     <a id="geneRelated sequences"></a>
1216
     <div class="tophelp">
1217
      <a href="/bookshelf/br.fcgi?</pre>
1218
   book=helpgene&part=EntrezGene#EntrezGene.Related Sequences" title="Help"
   class="genefullhelp">
        <span>Help</span>
1219
      </a>
1220
      <a href="#pageTop" title="Go to the top of the page" class="genefulltop">
1221
        <span>top of page</span>
1222
      </a>
1223
     </div>
1224
     <h2 class="secttitle">
1225
      <a class="jig-ncbitoggler-open">
1226
        <span class="ui-ncbitoggler-master-text">Related Sequences</span>
1227
      </a>
1228
     </h2>
1229
1230
     <div class="rprt-section-body">
      <table class="jig-ncbigrid" config="isPagable:true, pageSize:25,
1231
   isZebra:true">
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1232
          1233
            Nucleotide
1234
           Protein
1235
           Strain
1236
          1237
          \langle t.r \rangle
1238
            Heading
1239
           Accession and Version
1240
1241
        </thead>
1242
        1243
          \langle t.r \rangle
1244
           genomic
1245
           1246
             <a href="/nuccore/74325626">CH474035.2</a>
1247
           1248
            1249
             <a href="/protein/149032069">EDL86981.1</a>
1250
            1251
          1252
1253
          \langle t.r \rangle

1254
            1255
             <a href="/protein/149032070">EDL86982.1</a>
1256
            1257
          1258
          1259
```

```
9/2/2010
                 view-source:http://www.ncbi.nlm.nih.g...
        genomic
1260
        1261
         <a href="/nuccore/4589393">D87128.1</a>
1262
        1263
        None
1264
       1265
       1266
        mRNA
1267
        1268
         <a href="/nuccore/6561266">AF110021.1</a>
1269
        1270
        1271
         <a href="/protein/6561267">AAF16871.1</a>
1272
        1273
        Sprague-Dawley
1274
       1275
       1276
        mRNA
1277
        1278
         <a href="/nuccore/118764349">BC128705.1</a>
1279
        1280
        1281
         <a href="/protein/118764350">AAI28706.1</a>
1282
        1283
       1284
       1285
1286
        mRNA
        1287
         <a href="/nuccore/286195">D13906.1</a>
1288
        1289
        1290
         <a href="/protein/286196">BAA03006.1</a>
1291
1292
        Sprague-Dawley
1293
       1294
       \langle t.r \rangle
1295
        mRNA
1296
        1297
1298
         <a href="/nuccore/452119">L28112.1</a>
        1299
        1300
         <a href="/protein/452120">AAA41478.1</a>
1301
        1302
       1303
      1304
     1305
     <br />
1306
     <table id="proteinTblId" class="jig-ncbigrid" config="isPagable:true,
  pageSize:25, isZebra:true">
      <thead>
1308
1309
       \langle t.r \rangle
        Protein
1310
  Accession
        Links
1311
       1312
       1313
        GenePept Link
1314
```

```
9/2/2010
                          view-source:http://www.ncbi.nlm.nih.g...
            UniProtKB Link
1315
           1316
         </thead>
1317
         1318
           1319
             P34080.1
1320
             1321
              <a href="/protein/461529">GenPept</a>
1322
            1323
            1324
              <a href="http://www.uniprot.org/entry/P34080">UniProtKB/Swiss-
1325
    Prot:P34080</a>
            1326
           1327
           1328
            Q9QYA1
1329
             1330
              <a href="/protein/81907124">GenPept</a>
1331
             1332
            1333
    href="http://www.uniprot.org/entry/Q9QYA1">UniProtKB/TrEMBL:Q9QYA1</a>
            1335
           1336
         1337
       1338
     </div>
1339
    </div>
1340
1341
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1342
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1343
     <a href="/bookshelf/br.fcgi?</pre>
1344
    book=helpgene&part=EntrezGene#EntrezGene.Additional Links" title="Help"
    class="genefullhelp">
       <span>Help</span>
1345
1346
     <a href="#pageTop" title="Go to the top of the page" class="genefulltop">
1347
       <span>top of page</span>
1348
1349
    </div><h2 class="secttitle">
1350
     <a class="jig-ncbitoggler-open">
1351
       <span class="ui-ncbitoggler-master-text">Additional Links</span>
1352
     </a>
1353
    </h2>
1354
1355
           <div class="rprt-section-body">
1356
                  <div>
1357
     <h3 class="withnote">Additional Links/h3>
1358
     1359
       UCSC <a href="http://genome.ucsc.edu/cgi-bin/hgTracks?"</pre>
1360
    org=rat&position=NM 012909">UCSC</a>
       UniGene <a href="http://www.ncbi.nlm.nih.gov/UniGene/clust.cgi?"</pre>
1361
    ORG=Rn& CID=90076">Rn.90076</a>
     </111>
1362
    </div>
1363
1364
                  <h3 class="withnote">Gene LinkOut </h3>The following <a</pre>
1365
```

```
href="http://www.ncbi.nlm.nih.gov/projects/linkout/index.html">LinkOut</a>
   resources are supplied by external providers. These providers are
                                   responsible for maintaining the links. 
1366
     <div class="linkout">
1367
       <a class="jig-ncbitoggler main">
1368
         <span>Molecular Biology Databases
1369
       </a>
1370
       <111>
1371
         <1i>>
1372
           <span class="free-rsc"></span>
1373
           <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1374
   itool=Gene FullReport&PrId=5618&uid=25386&nlmid=&db=gene&url=
   http://www.ihop-net.org/UniPub/iHOP/to?focus=IHOP&id=321485">iHOP -
   Information Hyperlinked over Proteins</a>
         1375
         <1i>>
1376
           <span class="free-rsc"></span>
1377
           <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1378
   itool=Gene FullReport&PrId=6845&uid=25386&nlmid=&db=gene&url=
   http://www.nextbio.com/b/search/ov/Agp2?id=606439&type=feature">NextBio</a>
         1379
         <span class="free-rsc"></span>PANTHER Classification System
1380
         <111>
1381
           <1i>>
1382
             <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1383
   itool=Gene FullReport&PrId=4118&uid=25386&nlmid=&db=gene&url=
   http://www.pantherdb.org/genes/gene.do?acc=RAT|RGD=2142|UniProtKB=P34080">
               <span>Gene Information</span>
1384
             </a>
1385
           </1i>
1386
1387
         <span class="free-rsc"></span>Kyoto Encyclopedia of Genes and
1388
   Genomes
         <u1>
1389
           <1i>>
1390
             <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1391
   itool=Gene FullReport&PrId=5174&uid=25386&nlmid=&db=gene&url=
   http://www.genome.jp/dbget-bin/show pathway?rno04962+25386">
1392
               <span>Vasopressin-regulated water reabsorption/span>
             </a>
1393
           1394
           <1i>>
1395
             <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1396
   itool=Gene FullReport&PrId=5174&uid=25386&nlmid=&db=gene&url=
   http://www.genome.jp/dbget-bin/www bget?rno:25386">
               <span>rno:25386</span>
1397
             </a>
1398
           1399
         1400
         <1i>>
1401
           <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1402
   itool=Gene FullReport&PrId=7084&uid=25386&nlmid=&db=gene&url=
   https://portal.genego.com/cgi/gene.cgi?id=-1233852364">GeneGo</a>
         1403
         <1i>>
1404
           <span class="free-rsc"></span>
1405
           <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1406
```

```
itool=Gene FullReport&PrId=5059&uid=25386&nlmid=&db=gene&url=
   http://biogps.gnf.org/genereport/25386/">BioGPS</a>
         1407
         <1i>>
1408
           <span class="free-rsc"></span>
1409
           <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1410
   itool=Gene FullReport&PrId=5380&uid=25386&nlmid=&db=gene&url=
   http://natural.salk.edu/cgi-bin/creb?
   DB=rat& TABLE=Rat CRE Prediction& FIELD=LocusLink& QUERY=25386">CREB
   Target Gene Database</a>
         1411
         <span class="free-rsc"></span>GeneNetwork
1412
         <u1>
1413
           <1i>>
1414
             <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1415
   itool=Gene FullReport&PrId=5746&uid=25386&nlmid=&db=gene&url=
   http://www.genenetwork.org/webgtl/WebQTL.py?
   cmd=sch&geneid=25386&species=rat">
               <span>Records for gene expression in Rat
1416
             </a>
1417
           1418
         1419
         <1i>>
1420
           <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1421
   itool=Gene FullReport&PrId=7557&uid=25386&nlmid=&db=gene&url=
   https://www.genevestigator.com/gv/directlink.jsp?
   geneIDs=25386&geneIDType=Entrez Gene&source=NCBI">GENEVESTIGATOR</a>
         1422
         <1i>>
1423
           <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1424
   itool=Gene FullReport&PrId=5628&uid=25386&nlmid=&db=gene&url=
   https://analysis.ingenuity.com/pa/api/v2/geneview?
   geneidtype=entrezgene&geneid=25386&applicationname=Entrez">Ingenuity
   Pathways Analysis</a>
         1425
       </111>
1426
     </div>
1427
     <div class="linkout">
1428
1429
       <a class="jig-ncbitoggler main">
         <span>Research Materials</span>
1430
       </a>
1431
       <111>
1432
         ExactAntigen/Labome
1433
         <u1>
1434
           <1i>>
1435
             <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1436
   itool=Gene FullReport&PrId=5753&uid=25386&nlmid=&db=gene&url=
   http://www.labome.com/gene/rat/aguaporin-2-antibody.html">
               <span>antibody</span>
1437
             </a>
1438
           1439
           <1i>>
1440
             <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1441
   itool=Gene FullReport&PrId=5753&uid=25386&nlmid=&db=gene&url=
   http://www.labome.com/review/gene/rat/aquaporin-2-antibody-all-methods.html">
               <span>antibody review</span>
1442
             </a>
1443
```

```
9/2/2010
                               view-source:http://www.ncbi.nlm.nih.g...
             1444
             <1i>>
1445
               <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1446
    itool=Gene FullReport&PrId=5753&uid=25386&nlmid=&db=gene&url=
    http://www.labome.com/gene/rat/aquaporin-2-cDNA.html">
                 <span>cDNA clone/miRNA-related clone</span>
1447
               </a>
1448
             1449
             <1i>>
1450
               <a target=" blank" href="/entrez/utils/fref.fcgi?</pre>
1451
    itool=Gene FullReport&PrId=5753&uid=25386&nlmid=&db=gene&url=
    http://www.labome.com/gene/rat/aguaporin-2-protein.html">
                 <span>protein and peptide</span>
1452
               </a>
1453
             1454
           1455
         1456
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1457
    </div>
1458
1459
             </div>
1460
    </div>
1461
             </div>
1462
    </div>
1463
1464
                 <div class="title and pager bottom">
1465
1466
                 </div>
1467
1468
             </div>
1469
         </div>
1470
         <div class="supplemental">
1471
             <h2 class="offscreen noflow">Supplemental Content</h2>
1472
1473
             <div id="gene-sidebar">
1474
             <div>
1475
1476
             <div class="portlet brieflink">
1477
1478
       <div class="portlet head">
         <div class="portlet title">
1479
           <h3>Table of contents</h3>
1480
         </div>
1481
         <a
1482
    name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene RVFullReport.Gene RightCo
    lumn.Gene TableOfContents.Shutter" sid="1" href="#" class="portlet shutter"
    title="Show/hide content" remembercollapsed="true"
    pgsec name="Gene TableOfContents"
    id="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene RVFullReport.Gene RightColu
    mn.Gene TableOfContents.Shutter"></a>
      </div>
1483
      <div class="portlet content">
1484
       <u1>
1485
         <1i>>
1486
           <a href="#geneSummary">Summary</a>
1487
         1488
         <1i>>
1489
           <a href="#geneGenomic regions, transcripts, and products">Genomic regions,
1490
```

```
view-source:http://www.ncbi.nlm.nih.g...
9/2/2010
    transcripts, and products</a>
        1491
        <1i>>
1492
           <a href="#geneGenomic context">Genomic context</a>
1493
        1494
        <1i>>
1495
           <a href="#geneBibliography">Bibliography</a>
1496
        1497
        <1i>>
1498
           <a href="#geneInteractions">Interactions</a>
1499
        1500
        <1i>>
1501
           <a href="#geneGeneral gene info">General gene info</a>
1502
        1503
        <1i>>
1504
          <a href="#geneGeneral protein info">General protein info</a>
1505
        1506
1507
           <a href="#geneReference sequences">Reference sequences</a>
1508
        1509
        <1i>>
1510
1511
           <a href="#geneRelated sequences">Related sequences</a></a>
        1512
        <1i>>
1513
           <a href="#geneAdditional links">Additional links</a>
1514
        1515
1516
      </div>
1517
    </div>
1518
1519
             <div class="portlet brieflink">
1520
      <div class="portlet head">
1521
        <div class="portlet title">
1522
           <h3>Links</h3>
1523
        </div>
1524
1525
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    lumn.Gene LinksOne.Shutter" sid="1" href="#" class="portlet shutter"
    title="Show/hide content" remembercollapsed="true" pgsec name="Gene LinksOne"
    id="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene RVFullReport.Gene RightColu
    mn.Gene LinksOne.Shutter"></a>
      </div>
1526
      <div class="portlet content">
1527
      <u1>
1528
        <1i>>
1529
          <a href="/genome/clone/orderclone.cgi?db=gene&amp;uid=25386">Order cDNA
1530
    clone</a>
        1531
        \langle 1i \rangle
1532
           <a href="/gene?
1533
    Db=biosystems&DbFrom=gene&Cmd=Link&LinkName=gene biosystems&LinkR
    eadableName=BioSystems&IdsFromResult=25386">BioSystems</a>
        1534
        <1i>>
1535
           <a href="/gene?
1536
    Db=cdd&DbFrom=gene&Cmd=Link&LinkName=gene cdd&LinkReadableName=Co
    nserved%20Domains&IdsFromResult=25386">Conserved Domains</a>
```

```
9/2/2010
                           view-source:http://www.ncbi.nlm.nih.g...
       1537
        <1i>>
1538
          <a href="/gene?
1539
    Db=pmc&DbFrom=gene&Cmd=Link&LinkName=gene pmc&LinkReadableName=Fu
    11%20text%20in%20PMC&IdsFromResult=25386">Full text in PMC</a>
1540
        <1i>>
1541
          <a href="/gene?
1542
    Db=geo&DbFrom=gene&Cmd=Link&LinkName=gene geo&LinkReadableName=GE
    O%20Profiles&IdsFromResult=25386">GEO Profiles</a>
1543
        <1i>>
1544
         <a href="/gene?
1545
    Db=genome&DbFrom=gene&Cmd=Link&LinkName=gene genome&LinkReadableN
    ame=Genome& IdsFromResult=25386">Genome</a>
       1546
        <1i>>
1547
         <a href="/gene?
1548
    Db=homologene&DbFrom=gene&Cmd=Link&LinkName=gene homologene&LinkR
    eadableName=HomoloGene&IdsFromResult=25386">HomoloGene</a>
       1549
       <1i>>
1550
         <a href="/mapview/map search.cgi?
1551
    direct=on&idtype=gene&id=25386">Map Viewer</a>
       1552
        <1i>>
1553
          <a href="/gene?
1554
    Db=nuccore&DbFrom=gene&Cmd=Link&LinkName=gene nuccore&LinkReadabl
    eName=Nucleotide&IdsFromResult=25386">Nucleotide</a>
       </1i>
1555
        <1i>>
1556
         <a href="/gene?
1557
    Db=omia&DbFrom=gene&Cmd=Link&LinkName=gene omia&LinkReadableName=
    OMIA& IdsFromResult=25386">OMIA</a>
       1558
       <1i>>
1559
         <a href="/gene?
1560
    Db=probe&DbFrom=gene&Cmd=Link&LinkName=gene probe&LinkReadableNam
    e=Probe& IdsFromResult=25386">Probe</a>
       1561
       <1i>>
1562
         <a href="/gene?
1563
    Db=protein&DbFrom=gene&Cmd=Link&LinkName=gene protein&LinkReadabl
    eName=Protein&IdsFromResult=25386">Protein</a>
       1564
       <1i>>
1565
         <a href="/gene?
1566
    Db=pccompound& DbFrom=gene& Cmd=Link& LinkName=gene pccompound& LinkR
    eadableName=PubChem%20Compound&IdsFromResult=25386">PubChem Compound</a>
       1567
        <1i>>
1568
         <a href="/gene?
1569
    Db=pcsubstance&DbFrom=gene&Cmd=Link&LinkName=gene pcsubstance&Lin
    kReadableName=PubChem%20Substance&IdsFromResult=25386">PubChem Substance</a>
       1570
        <1i>>
1571
         <a href="/gene?
1572
```

```
Db=pubmed&DbFrom=gene&Cmd=Link&LinkName=gene pubmed&LinkReadableN
   ame=PubMed& IdsFromResult=25386">PubMed</a>
       1573
       <1i>>
1574
         <a href="/gene?
1575
   Db=pubmed& DbFrom=gene& Cmd=Link& LinkName=gene pubmed rif& LinkReada
   bleName=PubMed%20(GeneRIF)&IdsFromResult=25386">PubMed (GeneRIF)</a>
       1576
       <1i>>
1577
         <a href="/gene?
1578
   Db=protein&DbFrom=gene&Cmd=Link&LinkName=gene protein refseg&Link
   ReadableName=RefSeq%20Proteins&IdsFromResult=25386">RefSeq Proteins</a>
       1579
       <1i>>
1580
1581
         <a href="/gene?
   Db=nuccore&DbFrom=gene&Cmd=Link&LinkName=gene nuccore refsegrna&L
   inkReadableName=RefSeg%20RNAs&IdsFromResult=25386">RefSeg RNAs</a>
       1582
       <1i>>
1583
         <a href="/gene?
1584
   Db=snp&DbFrom=gene&Cmd=Link&LinkName=gene snp&LinkReadableName=SN
   P& IdsFromResult=25386">SNP</a>
       1585
       <1i>>
1586
         <a href="http://www.ncbi.nlm.nih.gov/SNP/snp ref.cgi?locusId=25386">SNP:
1587
   GeneView</a>
       1588
       <1i>>
1589
         <a href="http://www.ncbi.nlm.nih.gov/SNP/CGI/genesnpview.cgi?
1590
   report=genotype&fromdb=gene&id=25386">SNP: Genotype</a>
       1591
       <1i>>
1592
         <a href="/gene?
1593
   Db=taxonomy&DbFrom=gene&Cmd=Link&LinkName=gene taxonomy&LinkReada
   bleName=Taxonomy& IdsFromResult=25386">Taxonomy</a>
       1594
       <1i>>
1595
         <a href="/gene?
1596
   Db=unists&DbFrom=gene&Cmd=Link&LinkName=gene unists&LinkReadableN
   ame=UniSTS& IdsFromResult=25386">UniSTS</a>
       1597
       <1i>>
1598
         <a href="/gene?
1599
   Db=unigene& DbFrom=gene& Cmd=Link& LinkName=gene unigene& LinkReadabl
   eName=UniGene& IdsFromResult=25386">UniGene</a>
       1600
       <1i>>
1601
         <a href="/gene?
1602
   Cmd=ShowLinkOut&Db=gene&TermToSearch=25386">LinkOut</a>
       1603
     </111>
1604
   </div>
1605
   </div>
1606
1607
           <div class="portlet brieflink">
1608
     <div class="portlet head">
1609
       <div class="portlet title">
1610
```

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                               view-source:http://www.ncbi.nlm.nih.g...
           <h3>Links to external resources</h3>
1611
         </div>
1612
        < a
1613
    name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene RVFullReport.Gene RightCo
    lumn.Gene LinksTwo.Shutter" sid="1" href="#" class="portlet shutter"
    title="Show/hide content" remembercollapsed="true" pgsec name="Gene LinksTwo"
    id="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene RVFullReport.Gene RightColu
    mn.Gene LinksTwo.Shutter"></a>
      </div>
1614
      <div class="portlet content">
1615
      <u1>
1616
        <1i>>
1617
           <a href="http://rgd.mcw.edu/generalSearch/RgdSearch.jsp?</pre>
1618
    quickSearch=1& searchKeyword=2142">RGD</a>
        1619
        <1i>>
1620
           <a href="http://www.ensembl.org/Rattus norvegicus/geneview?"
1621
    gene=ENSRNOG00000000297">Ensembl</a>
        1622
        <1i>>
1623
           <a href="http://ratmap.gen.gu.se/ShowSingleLocus.htm?"</pre>
1624
    accno=41271">RATMAP</a>
        1625
        <1i>>
1626
           <a href="http://www.ncbi.nlm.nih.gov/sutils/evv.cgi?"</pre>
1627
    taxid=10116&contig=NW 047784.1&gene=Agp2&lid=25386&from=5053840&a
    mp; to=5058876">Evidence Viewer</a>
        1628
        <1i>>
1629
           <a href="http://www.ncbi.nlm.nih.gov/mapview/modelmaker.cgi?</pre>
1630
    taxid=10116&contig=NW 047784.1&from=5053840&to=5058876&gene=Aqp2&
    amp;lid=25386">ModelMaker</a>
        1631
         <1i>>
1632
           <a href="http://genome.ucsc.edu/cgi-bin/hgTracks?"</pre>
1633
    org=rat&position=NM 012909">UCSC</a>
        1634
         <1i>>
1635
1636
           <a href="http://mgc.nci.nih.gov/Genes/CloneList?"</pre>
    ORG=Rn&LIST=BC128705">MGC</a>
        1637
        <1i>>
1638
           <a href="http://www.genome.jp/dbget-bin/www bget?rno:25386">KEGG</a>
1639
         1640
      1641
    </div>
1642
    </div>
1643
1644
             <div class="portlet brieflink">
1645
      <div class="portlet head">
1646
        <div class="portlet title">
1647
           <h3>General information</h3>
1648
        </div>
1649
1650
    name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene RVFullReport.Gene RightCo
    lumn.Gene GeneralInfo.Shutter" sid="1" href="#" class="portlet shutter"
    title="Show/hide content" remembercollapsed="true" pgsec name="Gene GeneralInfo"
```

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```
id="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene RVFullReport.Gene RightColu
    mn.Gene GeneralInfo.Shutter"></a>
      </div>
1651
      <div class="portlet content">
1652
      <u1>
1653
        <1i>>
1654
          <a href="http://www.pubmedcentral.nih.gov/articlerender.fcgi?</pre>
1655
    tool=pubmed&pubmedid=15608257">About Entrez Gene</a>
        1656
        <1i>>
1657
          <a
1658
    href="http://www.ncbi.nlm.nih.gov/entrez/query/static/help/genefaq.html">FAQ</a>
        1659
        <1i>>
1660
          <a href="ftp://ftp.ncbi.nlm.nih.gov/gene/">FTP site</a>
1661
        1662
        <1i>>
1663
1664
    href="http://www.ncbi.nlm.nih.gov/entrez/query/static/help/genehelp.html">Help</a</pre>
        1665
        <1i>>
1666
          <a href="http://www.ncbi.nlm.nih.gov/books/bv.fcgi?"</pre>
1667
    rid=handbook.chapter.ch19">NCBI Handbook</a>
        1668
        <1i>>
1669
1670
          < a
    href="http://www.ncbi.nlm.nih.gov/projects/Gene/gentrez stats.cgi">Statistics</a>
        1671
        <1i>>
1672
          <a href="http://www.ncbi.nlm.nih.gov/books/bv.fcgi?"</pre>
1673
    rid=helpmyncbi.chapter.MyNCBI">My NCBI help</a>
        1674
      1675
    </div>
1676
    </div>
1677
1678
            <div class="portlet brieflink">
1679
1680
      <div class="portlet head">
        <div class="portlet title">
1681
          <h3>Related sites</h3>
1682
        </div>
1683
        <a
1684
    name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene RVFullReport.Gene RightCo
    lumn.Gene RelatedSites.Shutter" sid="1" href="#" class="portlet shutter"
    title="Show/hide content" remembercollapsed="true" pgsec name="Gene RelatedSites"
    id="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene RVFullReport.Gene RightColu
    mn.Gene RelatedSites.Shutter"></a>
      </div>
1685
      <div class="portlet content">
1686
      <111>
1687
        <1i>>
1688
          <a href="http://www.ncbi.nlm.nih.gov/BLAST">BLAST</a>
1689
        1690
        <1i>>
1691
          <a href="http://www.ncbi.nlm.nih.gov/portal/query.fcgi?"</pre>
1692
    p$site=entrez&DB=genome">Entrez Genome</a>
```

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                               view-source:http://www.ncbi.nlm.nih.g...
         1693
         <1i>>
1694
           <a href="http://www.ncbi.nlm.nih.gov/portal/query.fcgi?</pre>
1695
    p$site=entrez&db=genomeprj">Genome Project</a>
         1696
         <1i>>
1697
           <a href="http://www.ncbi.nlm.nih.gov/Genomes">Genomic Biology</a>
1698
         1699
         <1i>>
1700
           <a href="http://www.ncbi.nlm.nih.gov/projects/geo/">GEO</a>
1701
         1702
         <1i>>
1703
           <a href="http://www.ncbi.nlm.nih.gov/portal/query.fcgi?"</pre>
1704
    p$site=entrez&db=homologene">HomoloGene</a>
         1705
         <1i>>
1706
           <a href="http://www.ncbi.nlm.nih.gov/mapview/">Map Viewer</a>
1707
         1708
         <1i>>
1709
           <a href="http://www.ncbi.nlm.nih.gov/portal/guery.fcgi?</pre>
1710
    p$site=entrez&db=OMIM">OMIM</a>
         1711
         <1i>>
1712
           <a href="http://www.ncbi.nlm.nih.gov/portal/query.fcgi?"</pre>
1713
    p$site=entrez&DB=probe">Probe</a>
         1714
         <1i>>
1715
           <a href="http://www.ncbi.nlm.nih.gov/RefSeq/">RefSeq</a>
1716
         1717
         <1i>>
1718
           <a href="http://www.ncbi.nlm.nih.gov/portal/query.fcgi?"</pre>
1719
    p$site=entrez&db=unigene">UniGene</a>
         1720
         <1i>>
1721
           <a href="http://www.ncbi.nlm.nih.gov/portal/guery.fcgi?</pre>
1722
    p$site=entrez&DB=unists">UniSTS</a>
         1723
      1724
    </div>
1725
    </div>
1726
1727
             <div class="portlet brieflink">
1728
      <div class="portlet head">
1729
         <div class="portlet title">
1730
           <h3>Feedback</h3>
1731
         </div>
1732
1733
    name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene RVFullReport.Gene RightCo
    lumn.Gene Feedback.Shutter" sid="1" href="#" class="portlet shutter"
    title="Show/hide content" remembercollapsed="true" pgsec name="Gene Feedback"
    id="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene RVFullReport.Gene RightColu
    mn.Gene Feedback.Shutter"></a>
      </div>
1734
      <div class="portlet content">
1735
      <u1>
1736
         <1i>>
1737
           <a href="mailto:info@ncbi.nlm.nih.gov?subject=Gene">Contact Help Desk</a>
1738
```

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9/2/2010
                               view-source:http://www.ncbi.nlm.nih.g...
         1739
         <1i>>
1740
           <a href="http://www.ncbi.nlm.nih.gov/RefSeq/update.cgi?</pre>
1741
    geneid=2&symbol=A2M">Submit Correction</a>
         1742
         <1i>>
1743
           <a href="http://www.ncbi.nlm.nih.gov/projects/GeneRIF/GeneRIF.cgi?
1744
    lid=2& sym=A2M& name=alpha-2-macroglobulin& org=Homo
    sapiens&url=/gene/2">Submit GeneRIF</a>
         1745
      1746
    </div>
1747
    </div>
1748
1749
             <div class="portlet brieflink">
1750
       <div class="portlet head">
1751
         <div class="portlet title">
1752
           <h3>Subscription</h3>
1753
         </div>
1754
         <a
1755
    name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene RVFullReport.Gene RightCo
    lumn.Gene Subscription.Shutter" sid="1" href="#" class="portlet shutter"
    title="Show/hide content" remembercollapsed="true" pgsec name="Gene Subscription"
    id="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.Gene RVFullReport.Gene RightColu
    mn.Gene Subscription.Shutter"></a>
      </div>
1756
1757
      <div class="portlet content">
      <u1>
1758
         <1i>>
1759
           <a href="http://www.ncbi.nlm.nih.gov/mailman/listinfo/refseq-
1760
    announce">RefSeq</a>
         1761
         \langle 1i \rangle
1762
           <a href="http://www.ncbi.nlm.nih.gov/mailman/listinfo/gene-
1763
    announce">Gene</a>
        1764
         <1i>>
1765
           <a href="http://www.ncbi.nlm.nih.gov/mailman/listinfo/mapview-announce">Map
1766
    Viewer</a>
        1767
      1768
    </div>
1769
    </div>
1770
1771
    </div>
1772
1773
             <component id="Gene RVFullReport.Gene RightColMenuLinks"/>-->
    <!--
1774
             <div class="portlet">
1775
      <div class="portlet head">
1776
         <div class="portlet title">
1777
           <h3>Recent activity</h3>
1778
1779
         <a name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.Shutter"</pre>
1780
    sid="1" href="#" class="portlet shutter" title="Show/hide content"
    remembercollapsed="true" pgsec name="recent activity"
    id="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.Shutter"></a>
      </div>
1781
```

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9/2/2010
                            view-source:http://www.ncbi.nlm.nih.g...
      <div class="portlet content">
1782
        <div id="HTDisplay" class="">
1783
          <input
1784
    name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.Cmd" sid="1"
    type="hidden" />
          <div class="action">
1785
1786
    name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.ClearHistory"
    sid="1"
    realname="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.ClearHistor
    y" cmd="ClearHT" href="?cmd=ClearHT&" onclick="return false;"
    id="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.ClearHistory">
                                   Clear
1787
                               </a>
1788
1789
    name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.HistoryToggle"
    sid="1"
    realname="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.HistoryTogg
    le" class="HTOn" cmd="HTOff" href="?cmd=HTOff&" onclick="return false;"
    id="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.HistoryToggle">
                                   Turn Off
                               </a>
1791
1792
    name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.HistoryToggle"
    realname="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.HistoryTogg
    le" class="HTOff" cmd="HTOn" href="?cmd=HTOn&" onclick="return false;"
    id="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.HistoryToggle">
                                   Turn On
1793
                               </a>
1794
          </div>
1795
          1796
            1797
              <a class="htb ralinkpopperctrl" ref="log$=activity"</pre>
1798
    href="/portal/utils/pageresolver.fcgi?recordid=1283478645441170">Agp2 aguaporin 2
    (collecting duct) [Rattus norvegicus]</a>
              <div class="ralinkpop offscreen noflow">Aqp2 aquaporin 2 (collecting
1799
    duct) [Rattus norvegicus] < div class="brieflinkpopdesc" > Gene ID: 25386 < / div > < / div >
1800
              <div class="tertiary">Gene</div>
            1801
            1802
              <a class="htb" ref="log$=activity"</pre>
1803
    href="/portal/utils/pageresolver.fcgi?recordid=1283478627851055">aqp2 <span</pre>
    class="number">(111)</span></a>
              <div class="tertiary">Protein</div>
1804
            1805
          1806
          Your browsing activity is empty.
1807
          Activity recording is turned off.
1808
          1809
1810
    name="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.HistoryOn"
    sid="1"
    realname="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.HistoryOn"
    cmd="HTOn" href="?cmd=HTOn&" onclick="return false;"
    id="EntrezSystem2.PEntrez.Gene.Gene ResultsPanel.HistoryDisplay.HistoryOn">Turn
    recording back on</a>
```

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                            view-source:http://www.ncbi.nlm.nih.g...
1811
          <a class="seemore" href="/sites/myncbi/recentactivity">See more...</a>
1812
        </div>
1813
      </div>
1814
    </div>
1815
1816
    </div>
1817
        </div>
1818
    </div>
1819
1820
        <div id="NCBIFooter dynamic">
1821
        <div class="breadcrumbs">You are here:
1822
                <span id="breadcrumb text"><a href="/guide/">NCBI</a>
1823
                           > <a href="http://www.ncbi.nlm.nih.gov/guide/genes-
1824
    expression/">Genes & Expression</a>
1825
                           &qt; Gene</span></div>
1826
        <a id="help-desk-link" class="help desk" target=" blank" href="/sites/ehelp?
1827
    & Ncbi App=entrez & amp; Db=gene & amp; Page=full report & amp; Snapshot=/projects/entr
    ez/Entrez@4.328&Time=2010-09-02T21:50:45-04:00&Host=portal204"
    onclick="window.open('/sites/ehelp?
    & Ncbi App=entrez & amp; Db=gene & amp; Page=full report & amp; Snapshot=/projects/entr
    ez/Entrez@4.328& Time=2010-09-02T21:50:45-
    04:00& Host=portal204', 'HelpDesk', 'resizable=no, scrollbars=yes, location=no, sta
    tus=yes, menubar=no, top=50, left=200, width=720, height=695'); return false; ">Write to
    the Help Desk</a>
1828
        <noscript><img src="/stat?</pre>
    jsdisabled=true&ncbi app=entrez&ncbi db=gene&ncbi pdid=full report&am
    p;ncbi phid=396C0AC9C8053B010000000002AA294" /></noscript>
    </div>
1829
        <div xmlns="http://www.w3.org/1999/xhtml" class="footer" id="footer"</pre>
1830
    xml:base="http://127.0.0.1/sites/static/header footer/">
        <div class="crest"></div>
1831
1832
        <div class="subfooter">
1833
            <h2 class="offscreen noflow">Simple NCBI Directory</h2>
1834
            1835
               <h3>Getting Started</h3>
1836
1837
               <1i><a href="/bookshelf/br.fcgi?book=helpcollect">NCBI Help
1838
    Manual</a>
               <a href="/books/bv.fcgi?rid=handbook.TOC&amp;depth=2">NCBI</a>
1839
    Handbook</a>
               <a href="/quide/training-tutorials/">Training &amp;
1840
    Tutorials</a>
           1841
1842
            <h3>
1843
                           Resources
1844
    </h3><a href="/quide/literature/">Literature</a><a
1845
    href="/guide/dna-rna/">DNA & RNA</a><a</pre>
    href="/quide/proteins/">Proteins</a><a href="/quide/sequence-
    analysis/">Sequence Analysis</a><a href="/quide/genes-expression/">Genes
    & Expression</a><a href="/quide/genomes-maps/">Genomes &amp;
    Maps</a><a href="/quide/domains-structures/">Domains &amp;
    Structures</a><a href="/guide/genetics-medicine/">Genetics & amp;
    Medicine</a><a href="/quide/taxonomy/">Taxonomy</a><a
```

```
href="/guide/data-software/">Data & Software<//a><a</pre>
   href="/quide/training-tutorials/">Training & amp; Tutorials</a><a</pre>
   href="/guide/homology/">Homology</a><a href="/guide/small-
   molecules/">Small Molecules</a><a</pre>
   href="/guide/variation/">Variation</a>
          1846
              <h3>Popular</h3>
1847
              <a href="/pubmed/">PubMed</a>
1848
              <a href="/nucleotide/">Nucleotide</a>
1849
              <a href="http://blast.ncbi.nlm.nih.gov/">BLAST</a>
1850
              <a href="http://www.pubmedcentral.nih.gov/"</pre>
1851
   class="newdomain">PubMed Central</a>
              <a href="/gene/">Gene</a>
1852
              <a href="/books/">Bookshelf</a>
1853
              <a href="/protein/">Protein</a>
1854
              <a href="/omim/">OMIM</a>
1855
              <a href="/genome/">Genome</a>
1856
              <a href="/snp/">SNP</a>
1857
              <a href="/Structure/">Structure</a>
1858
          1859
          1860
              <h3>Featured</h3>
1861
              <a href="/Genbank/">GenBank</a>
1862
              <a href="/refseq/">Reference Sequences</a>
1863
              <a href="/mapview/">Map Viewer</a>
1864
              <a href="/genomepri">Genome Projects</a>
1865
              <a href="/genome/guide/human/">Human Genome</a>
1866
              <a href="/genome/guide/mouse/">Mouse Genome</a>
1867
              <a href="/genomes/FLU/">Influenza Virus</a>
1868
              <a href="/tools/primer-blast/">Primer-BLAST</a>
1869
              <a href="/Traces/sra/">Sequence Read Archive</a>
1870
          1871
          1872
              <h3>NCBI Information</h3>
1873
              <a href="/About/">About NCBI</a>
1874
              <a href="/CBBresearch/">Research at NCBI</a>
1875
1876
              <a href="/bookshelf/br.fcgi?book=newsncbi">NCBI</a>
   Newsletter</a>
1877
              <a href="/Ftp/">NCBI FTP Site</a>
          1878
      </div>
1879
1880
1881
       <div id="ncbifooter" class="contact info">
1882
          <div id="footer-contents-right">
1883
              <a href="http://www.nih.gov" title="NIH" class="nih img link</pre>
1884
   newdomain">NIH</a>
              <a href="http://www.dhhs.gov" title="DHHS" class="dhhs img link
1885
   newdomain">DHHS</a>
              <a href="http://www.usa.gov" title="USA.gov" class="usagov img link
1886
   newdomain">USA.gov</a>
1887
          </div>
1888
          <div id="footer-contents-left">
1889
1890
              <a href="/About/disclaimer.html">Copyright</a> | <a</pre>
1891
   href="/About/disclaimer.html#disclaimer">Disclaimer</a> |
```

```
9/2/2010
                               view-source:http://www.ncbi.nlm.nih.g...
                 <a href="http://www.nlm.nih.gov/privacy.html"</pre>
1892
    class="newdomain">Privacy</a> | <a</pre>
    href="/About/accessibility.html">Accessibility</a> | <a</pre>
    href="/About/glance/contact info.html">Contact</a>
                 1893
                      <span class="url">
1894
                          <a class="fn url newdomain"</pre>
1895
    href="http://www.ncbi.nlm.nih.gov">National Center for
                              Biotechnology Information</a>,
1896
                      </span> <span class="org url"><a
1897
    href="http://www.nlm.nih.gov/">U.S. National Library of Medicine</a></span>
                      <span class="adr">
1898
                          <span class="street-address">8600 Rockville Pike</span>,
1899
     <span class="locality">Bethesda</span>
                          <span class="region">MD</span>, <span class="postal-</pre>
1900
    code">20894</span>
                          <span class="country-name">USA</span>
1901
                      </span>
1902
                 1903
             </div>
1904
         </div>
1905
         <script type="text/javascript"</pre>
1906
    src="/portal/portal3rc.fcgi/rlib/js/InstrumentOmnitureBaseJS/InstrumentNCBIBaseJS
     /InstrumentPageStarterJS.js"></script>
    </div>
1907
1908
    </div>
1909
             <input type="hidden" name="p$a" id="p$a" /><input type="hidden"</pre>
1910
    name="p$1" id="p$1" value="EntrezSystem2" /><input type="hidden" name="p$st"</pre>
    id="p$st" value="gene" /><input name="SessionId" id="SessionId"</pre>
    value="39694A9BC8053A61 0188SID" disabled="disabled" type="hidden" /><input
    name="Snapshot" id="Snapshot" value="/projects/entrez@4.328"
    disabled="disabled" type="hidden" /></form>
         <!--
1911
    39694A9BC8053A61 0188SID:/projects/entrez/Entrez:4.328:portal204:v2.10.2.r202133:
    Tue, Aug 24 2010 12:00:12--></body>
1912 </html>
```