De novo predictions of localization of gene expression confirmed by published experiments

Table 6: **Functional unit pep2ebrain**: embryonic central brain && protocerebrum primordium && procephalic ectoderm primordium

<table>
<thead>
<tr>
<th>Gene name</th>
<th>Prediction Rank</th>
<th>Expression</th>
<th>Reference</th>
</tr>
</thead>
</table>
| gro       | 1              | Maternal ubiquitous  
St.8; broad distribution including procephalic ectoderm  
St.11; brain and trunk CNS  | Maier et al. [1], Fig.3  
Hartley et al. [2], Fig.8 |
| Nrt       | 13             | St. 6; Dorsal and ventral ectoderm.  
St 7; ventral furrow (mesoderm), cephalic furrow.  
St. 9; Brain and trunk CNS.  | Hortsch et al. [3], Fig.1,2&3 |
| vvl       | 21             | St.10; Midline and tracheal placodes  
St.10-11; procephalon, clypeolabrum, labium (minor component of expression)  | Anderson et al. [4],Fig.2 |
| hth       | 26             | Blastoderm.  
St.6-7: ectoderm NOT procephalic (posterior to cephalic furrow).  
St.10-11; clypeolabrum, mandibular, labial.  
St.14; CNS  | Kurant et al. [5], Fig.5  
Rieckhof et al. [6], Fig.7  
Nagao et al. [7], Fig.1 |
| 18w       | 27             | Blastoderm, procephalic region.  
St.5; cephalic furrow  
St.8; procephalic ectoderm  
St.12; clypeolabrum  | Eldon et al. [8], Fig.1  
Chiang et al. [9] |
| mts       | 28             | procephalic neuroblasts  
supraesophageal ganglion  | Mayer-Jaekel et al. [10], Fig.7&8 |
| mnb       | 33             | Late (St.16) condensed trunk and brain CNS, supraesophageal ganglia  | Tejedor et al. [11], Fig.9 |
| fur1      | 76             | Ventral nerve cord and brain.  
St.14; antennomaxillary complex, subesophageal ganglion, clypeolabrum.  | Hayflick et al. [12], Fig.9  
Roebrook et al. [13], Fig.9 |
| comm      | 78             | Blastoderm pair rule pattern including procephalic ectoderm.  
St.910; procephalic ectoderm and ventral nerve cord primordia  | Tear et al. [14], Fig.4  
BDGP |
| N         | 93             | Blastoderm, neurogenic region.  
Procephalic epidermis.  
Supraesophageal ganglia.  
Optic lobe primordia.  | Hartley et al. [15], Fig.2 |
| slp1      | 97             | St.5; Blastoderm, Procephalic region.  
St.6; Procephalon, head and cephalic furrow.  
St.10; procephalon, clypeolabrum, gnathal ventral nerve cord and brain  | Grossniklaus et al. [16], Fig.4 |

*continued on next page...*
### Table 6 continued from previous page.

<table>
<thead>
<tr>
<th>Gene name</th>
<th>Prediction Rank</th>
<th>Expression</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>vnd</td>
<td>98</td>
<td>Blastoderm onwards: ventral and procephalic neuroectoderm. Brain and trunk neuroblasts.</td>
<td>Jimenez <em>et al.</em> [17], Fig.3</td>
</tr>
<tr>
<td>Mvl</td>
<td>101</td>
<td>Procephalic lobe, brain</td>
<td>Rodrigues <em>et al.</em> [18], Fig.7</td>
</tr>
<tr>
<td>disco</td>
<td>104</td>
<td>labrum, cephalic furrow. procephalic. gnathal segment. clypolabrum. optic and antennal brain lobes.</td>
<td>Lee <em>et al.</em> [19], Fig.1&amp;2</td>
</tr>
<tr>
<td>tgo</td>
<td>112</td>
<td>Brain and ventral nerve cord. Supraesophagheal ganglia. Maxillary, labial, mandibular and antennal segments. antennal complex.</td>
<td>Sonnenfeld <em>et al.</em> [20], Fig.3 Emmons <em>et al.</em> [21], Fig.5</td>
</tr>
<tr>
<td>Nrk</td>
<td>128</td>
<td>St.11; cephalic and trunk neuroectoderm. Brain and ventral nerve cord.</td>
<td>Oishi <em>et al.</em> [22], Fig.4</td>
</tr>
<tr>
<td>bnb</td>
<td>137</td>
<td>St.5-9; blastoderm ubiquitous. St.8; Elevated posterior midgut invagination St.9; Dorsal epidermis, mesectoderm. supra and subesophageal ganglia. Brain. St13; epidermal.</td>
<td>Ng <em>et al.</em> [23], Fig.5&amp;6</td>
</tr>
<tr>
<td>rst</td>
<td>144</td>
<td>Ventral midline. Mandibular, maxillary and labial segments. Clypeolabrum</td>
<td>Ramos <em>et al.</em> [24], Fig.4</td>
</tr>
</tbody>
</table>

### References


