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

Gene name	Prediction Rank	Expression	Reference
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; ectodermNOT 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; cepahalic 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, clipeolabrum.	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

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

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