



**Figure S2** - Alignment of GCM domains coded by glial cells missing (GCM) genes and by *MuDRF* transposable elements.

Similarity to other *MuDR* transposases was established after four PSI-BLAST iterations using *MuDRF* transposase as a query. *MuDRF* elements were also found in other Basidiomycota, including PGTG, *M. larici-populina*, *Laccaria bicolor*, *Schizophyllum commune* and *Coprinopsis cinerea*. Outside fungi we also identified a full-length *MuDRF* element in *Heterolobosea* (*Naegleria gruberi*). *MuDRF* elements are flanked by 9-bp *TSD*, characteristic for *MuDR* elements. Triangles indicate residues coordinating two Zn ions [31]. Gene names and accession numbers are as follows: mGCMa, Mouse GCM homolog 1 gene (1ODH); mGCMb, mouse GCM homolog 2 gene (EDL40969); dGCM, *Drosophila melanogaster* GCM gene (BAA10905); dGCM2, *D. melanogaster* GCM 2 gene (NP\_609302); GCM\_Nv, hypothetical protein gene from *Nematostella vectensis* (XP\_001625315). *MuDRF* transposon sequences are deposited in Repbase (<http://www.girinst.org/rebase/>).