

Output results of CLIME (CLustering by Inferred Models of Evolution)

Dataset:

Num of genes in input gene set: 12

Total number of genes: 20834

Prediction LLR threshold: 0

The CLIME PDF output two sections:

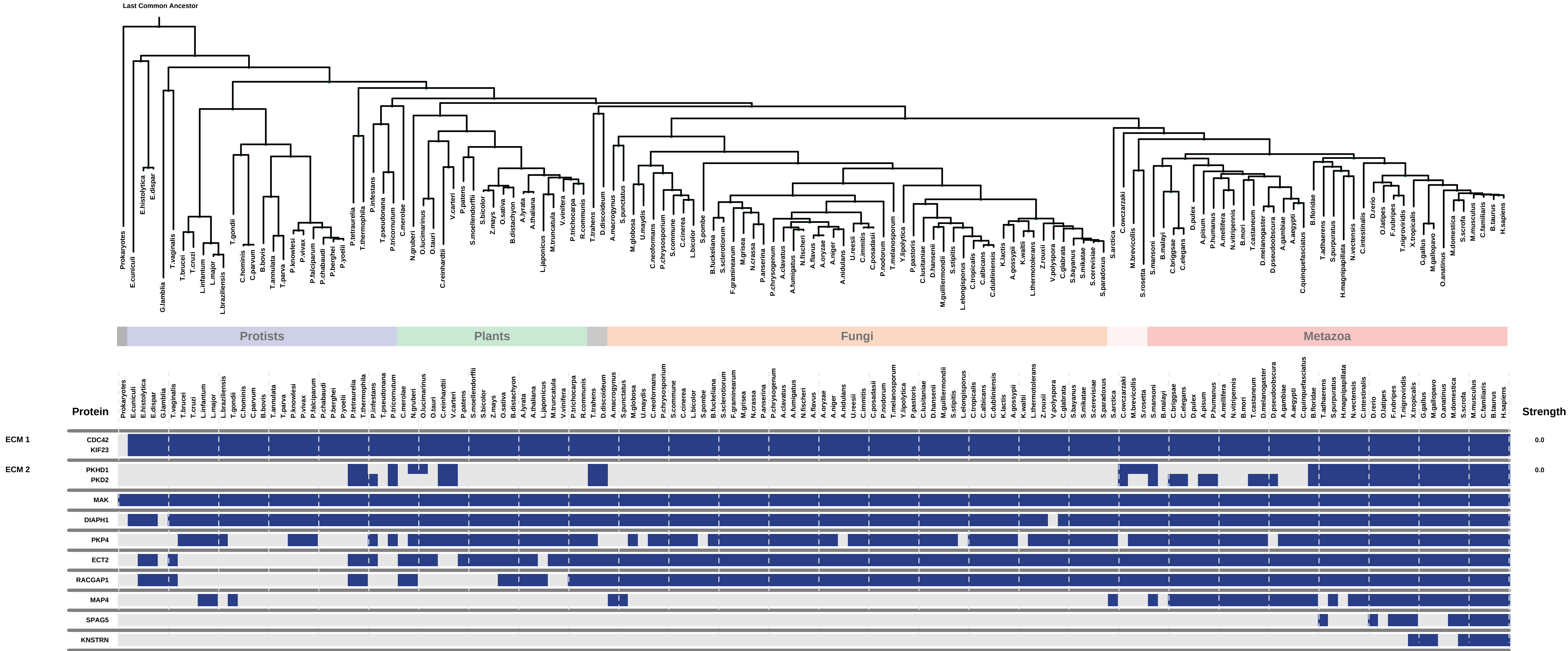
1) Overview of Evolutionarily Conserved Modules (ECMs)

- Top panel shows the predefined species tree.
- Bottom panel shows the partition of input genes into Evolutionary Conserved Modules (ECMs), ordered by ECM strength (shown at right), and separated by horizontal lines.
- Each row show one gene, where the phylogenetic profile indicates presence (blue) or absence (gray) of homologs in each species (column).
- Gene symbols are shown at left. Gray color indicates that the gene is a paralog to a higher scoring gene within the same ECM (based on BLASTP $E < 1e-3$).

2) Details of each ECM and its expansion ECM+

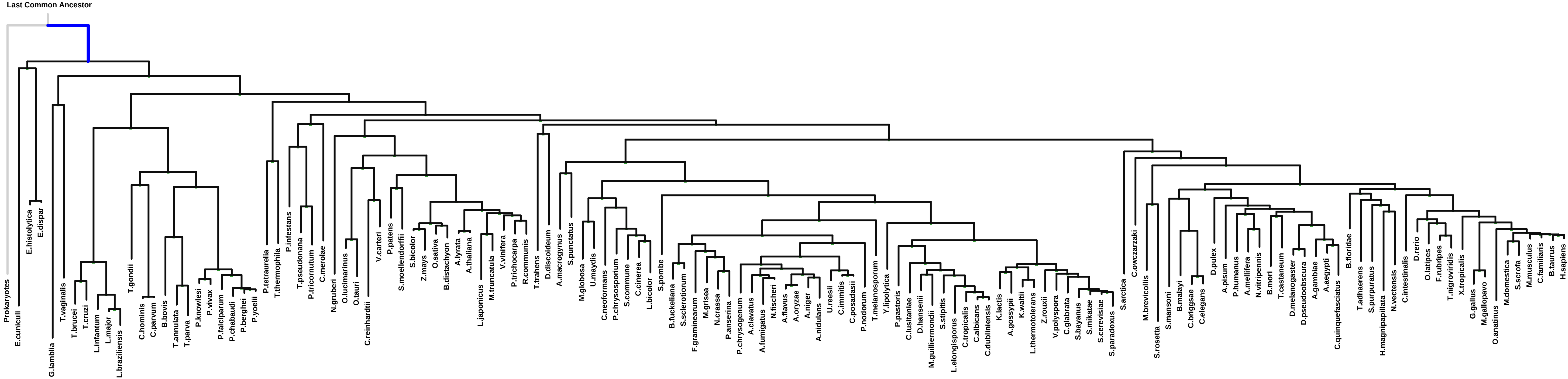
- Top panel shows the inferred evolutionary history on the predefined species tree. Branch color shows the gain event (blue) and loss events (red color, with brighter color indicating higher confidence in loss). Branches before the gain or after a loss are shown in gray.
- Bottom panel shows the input genes that are within the ECM (blue/white rows) as well as all genes in the expanded ECM+ (green/gray rows). The ECM+ includes genes likely to have arisen under the inferred model of evolution relative to a background model, and scored using a log likelihood ratio (LLR).
- PG indicates "paralog group" and are labeled alphabetically (i.e., A, B). The first gene within each paralog group is shown in black color. All other genes sharing sequence similarity (BLAST $E < 1e-3$) are assigned to the same PG label and displayed in gray.

Overview of Evolutionarily Conserved Modules (ECMs)



ECM 1, Gene set "mitotic spindle", Page 1

Num of ECM Genes: 2. Num of Predicted Genes: 0. ECM Strength: 0.0



PG

Protein	Protists	Plants	Fungi	Metazoa
CDC42				
KIF23				

- 1: apical part of cell
11: kinesin complex
- 2: filopodium
12: spindle
- 3: microtubule organizing center
- 4: midbody
- 5: mitotic spindle
- 6: neuron projection
- 7: secretory granule
- 8: spindle midzone
- 9: centralspindlin complex
- 10: intercellular bridge

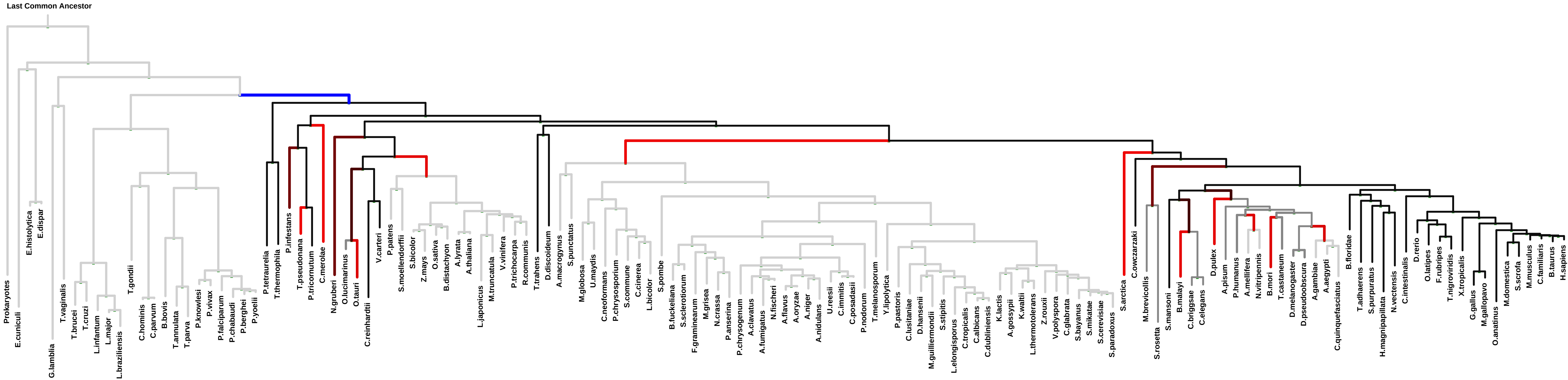
LLR

Notes

1/2/3/4/5/6/7/8
4/5/9/10/11/12

ECM 2, Gene set "mitotic spindle", Page 1

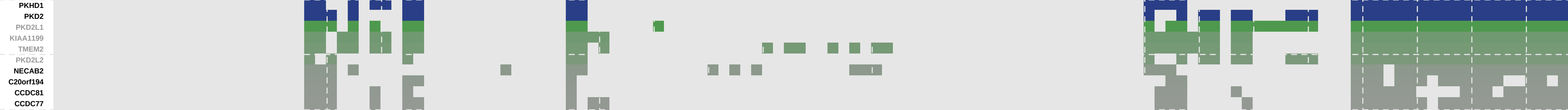
Num of ECM Genes: 2. Num of Predicted Genes: 8. ECM Strength: 0.0



PG

A
B
A
B
B
A

Protein



LLR

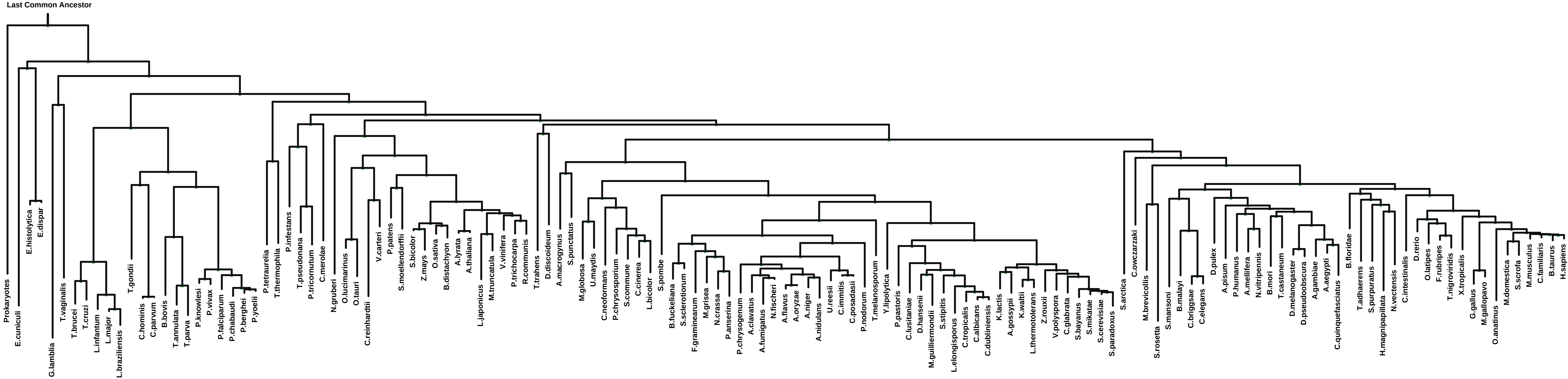
Notes

1/2/3/4
2/3/5/6/7/8/9/10/

1: anchored to external side of plasma membrane || 2: microtubule basal body || 3: mitotic spindle || 4: primary cilium || 5: basal cortex || 6: basal plasma membrane || 7: cell-cell junction || 8: cilium || 9: cilium part ||
10: filamentous actin || 11: integral to cytosolic side of endoplasmic reticulum membrane || 12: integral to luminal side of endoplasmic reticulum membrane || 13: lamellipodium || 14: motile primary cilium || 15: nonmotile primary cilium ||
16: polycystin complex

ECM 3, Gene set "mitotic spindle", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 0



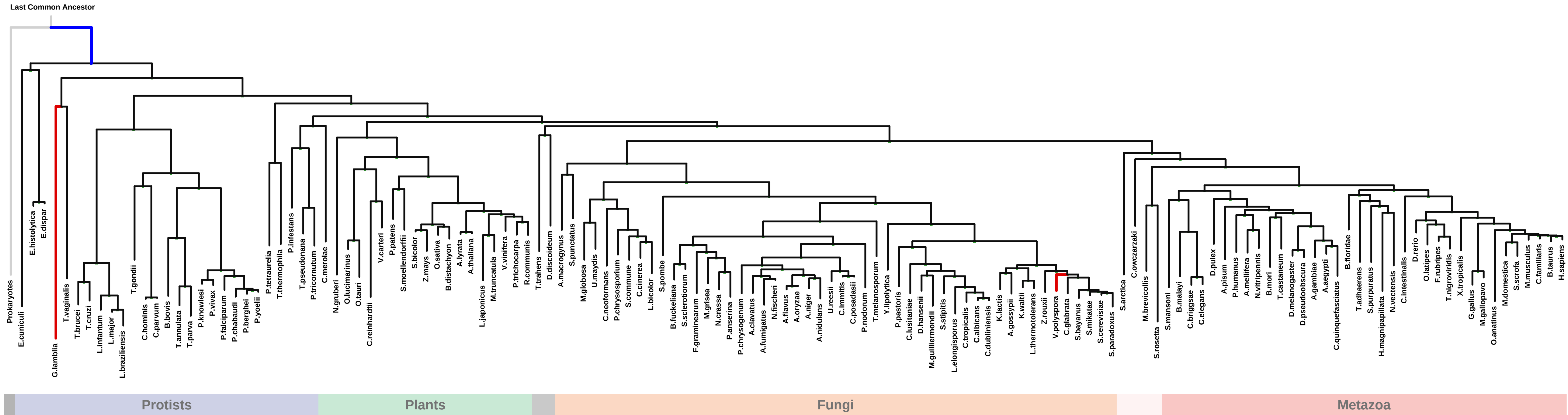
PG



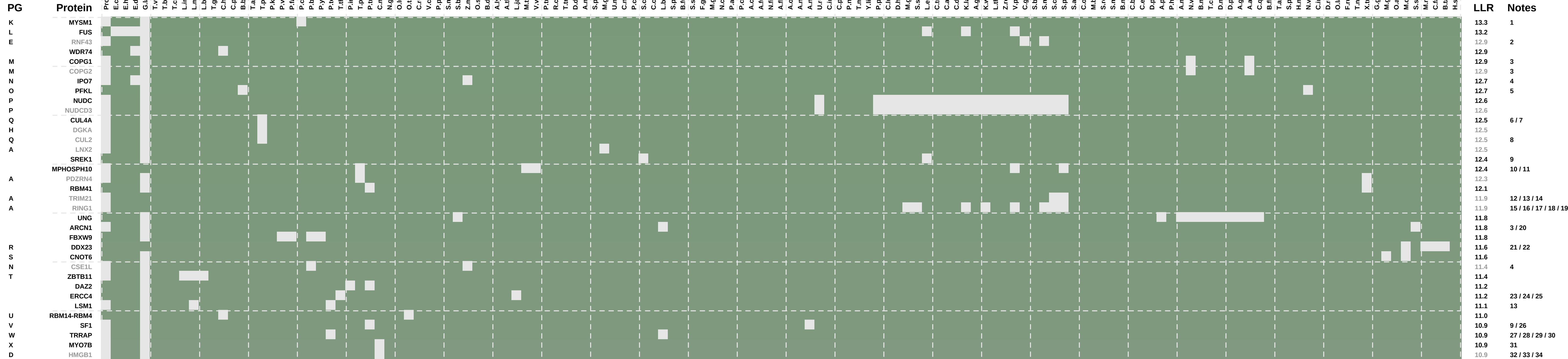
1: midbody || 2: mitotic spindle || 3: photoreceptor inner segment || 4: photoreceptor outer segment

LLR Notes

Num of ECM Genes: 1. Num of Predicted Genes: 500

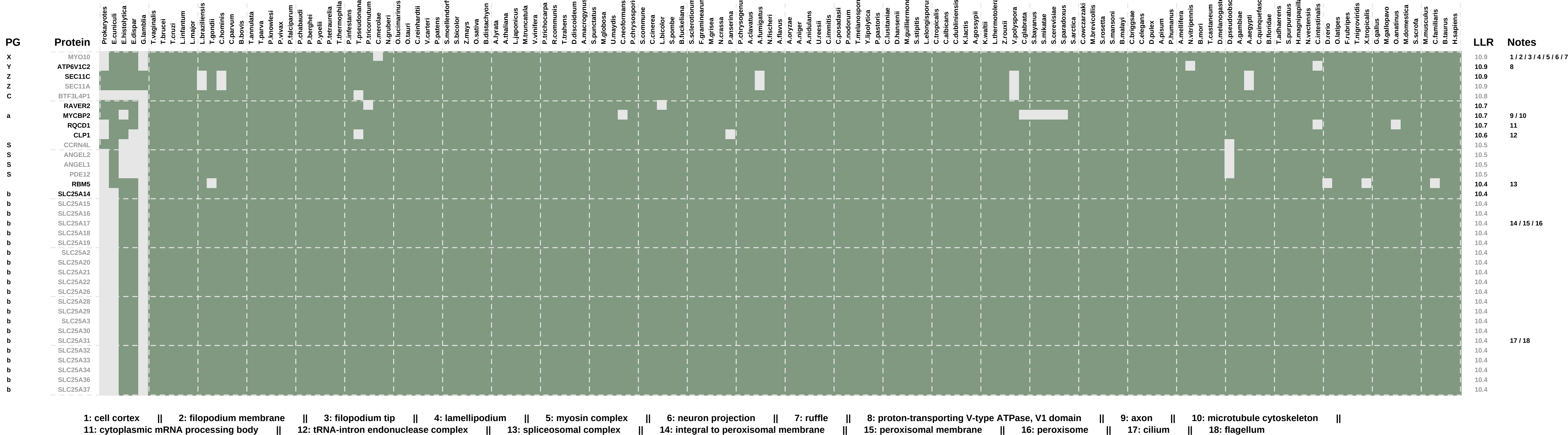
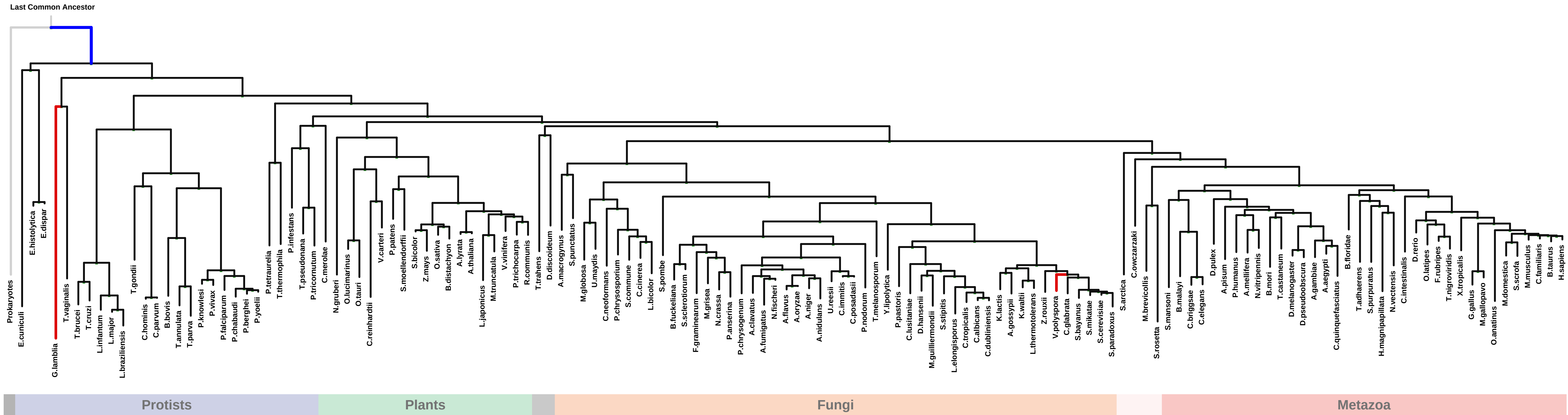
[illegible]

Num of ECM Genes: 1. Num of Predicted Genes: 500

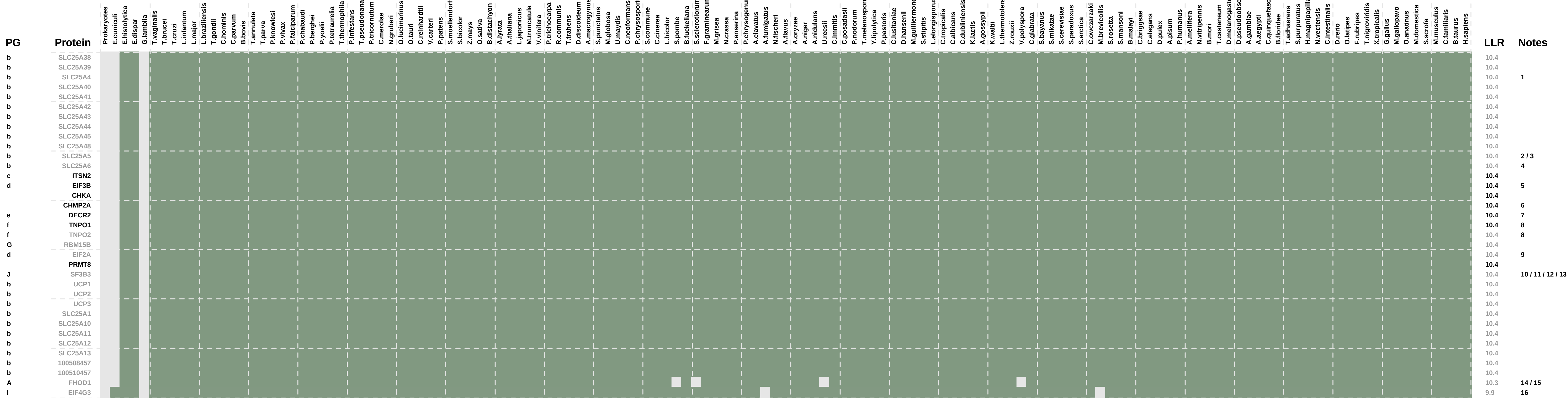
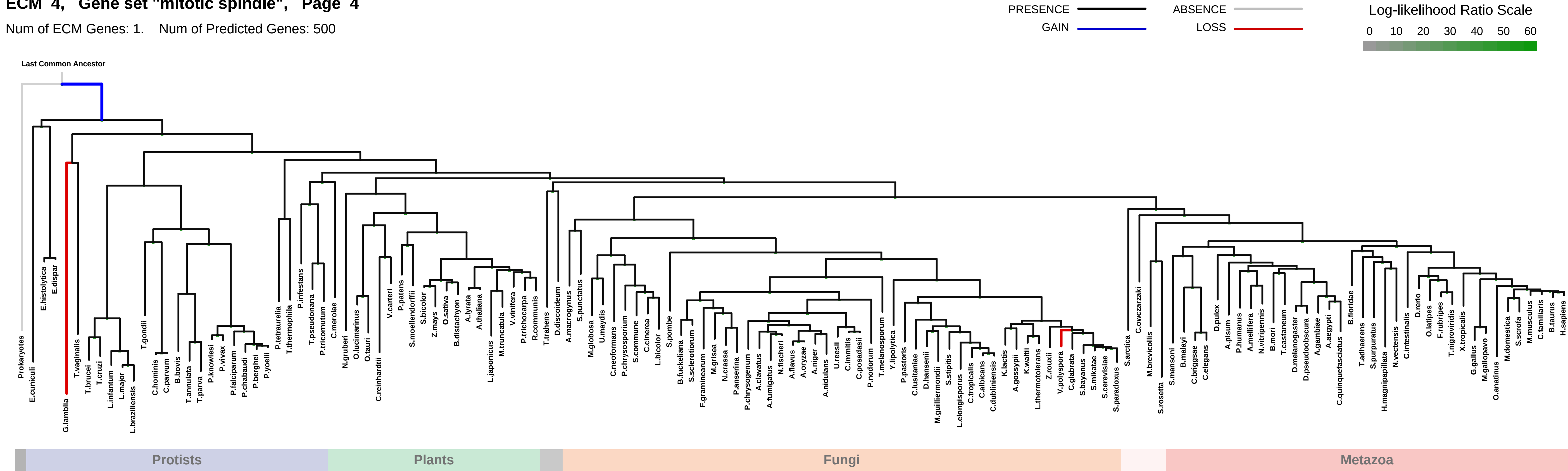


1: chromatin remodeling complex || 2: nuclear envelope || 3: COPI vesicle coat || 4: nuclear pore || 5: 6-phosphofructokinase complex || 6: Cul4A-RING ubiquitin ligase complex || 7: Cul4-RING ubiquitin ligase complex || 8: Cul2-RING ubiquitin ligase complex || 9: spliceosomal complex || 10: chromosome || 11: small nucleolar ribonucleoprotein complex || 12: cytoplasmic mRNA processing body || 13: ribonucleoprotein complex || 14: SCF ubiquitin ligase complex || 15: nuclear speck || 16: PcG protein complex || 17: PRC1 complex || 18: sex chromatin || 19: ubiquitin ligase complex || 20: clathrin adaptor complex || 21: catalytic step 2 spliceosome || 22: U5 snRNP || 23: chromosome, telomeric region || 24: nuclear chromosome, telomeric region ||

Num of ECM Genes: 1. Num of Predicted Genes: 500

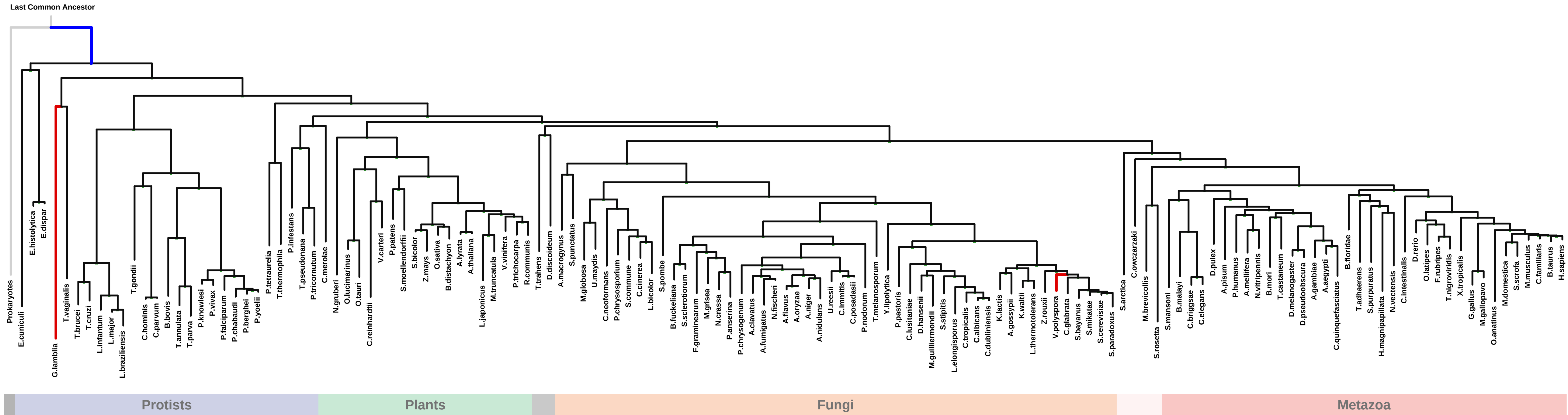


Num of ECM Genes: 1. Num of Predicted Genes: 500



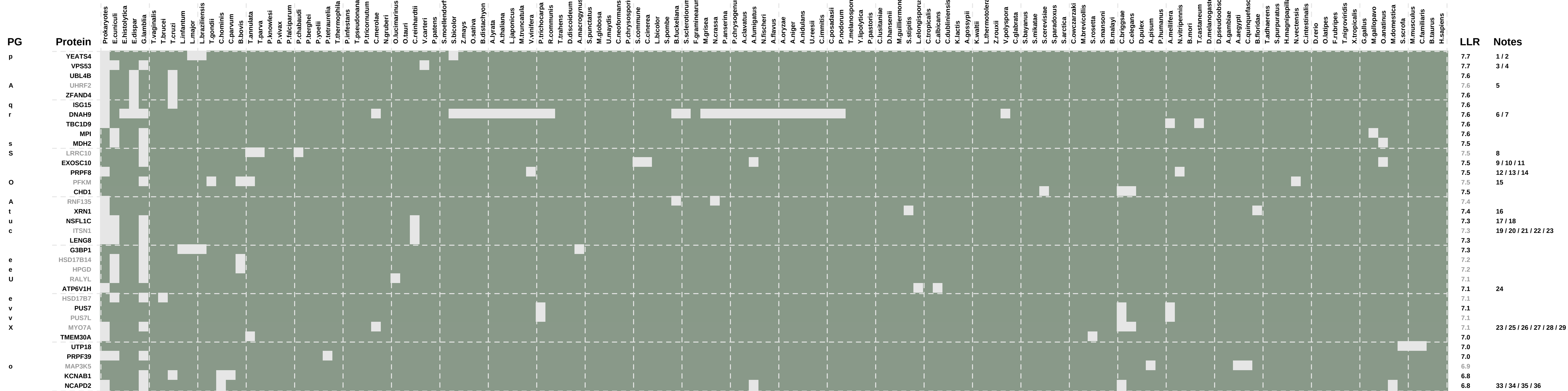
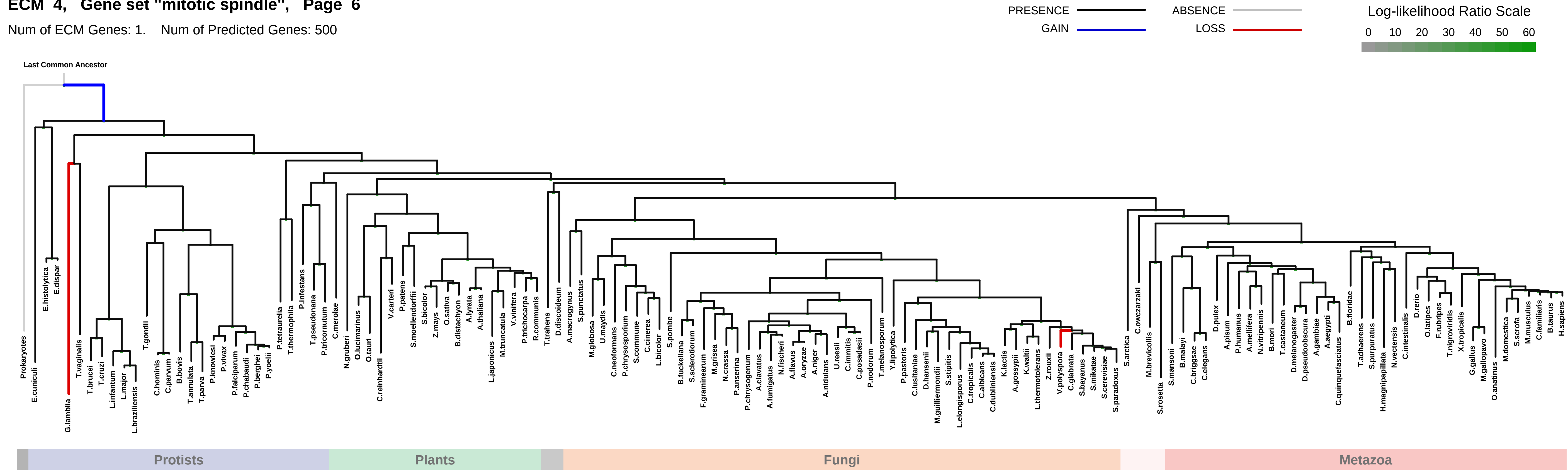
1: mitochondrial outer membrane || 2: mitochondrial nucleoid || 3: MMXD complex || 4: mitochondrial inner membrane presequence translocase complex || 5: eukaryotic translation initiation factor 3 complex || 6: late endosome membrane || 7: peroxisome || 8: nuclear pore || 9: eukaryotic translation initiation factor 2 complex || 10: catalytic step 2 spliceosome || 11: small nuclear ribonucleoprotein complex || 12: spliceosomal complex || 13: U12-type spliceosomal complex || 14: bleb || 15: stress fiber || 16: eukaryotic translation initiation factor 4F complex

Num of ECM Genes: 1. Num of Predicted Genes: 500



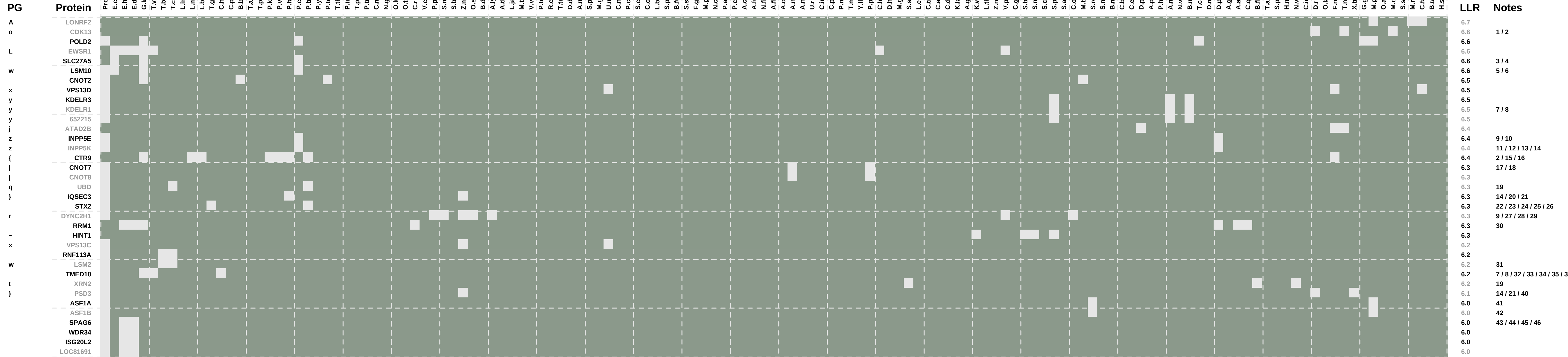
ECM 4, Gene set "mitotic spindle", Page 6

Num of ECM Genes: 1. Num of Predicted Genes: 500



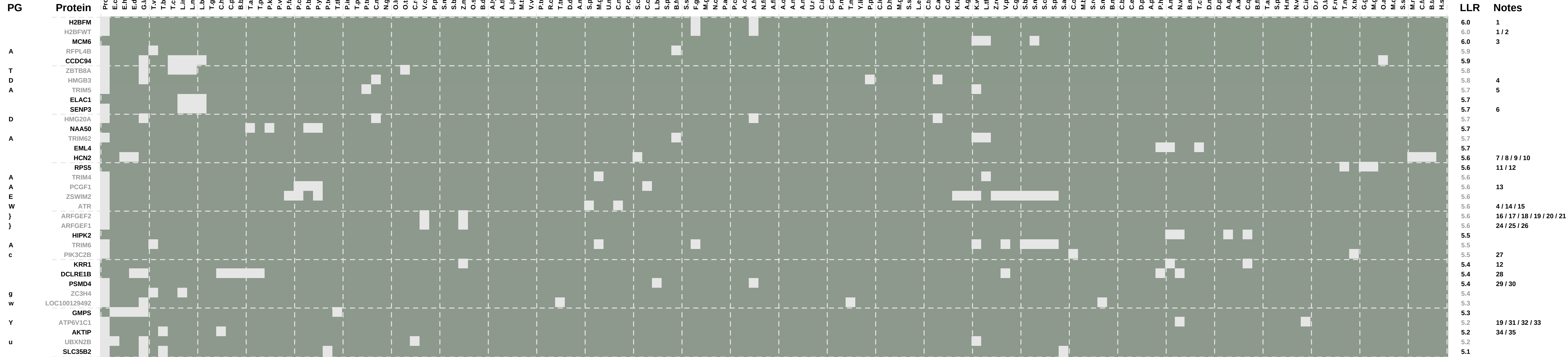
1: NuA4 histone acetyltransferase complex || 2: nuclear matrix || 3: endosome membrane || 4: GARP complex || 5: nuclear heterochromatin || 6: axonemal dynein complex || 7: cilium axoneme || 8: myofibril || 9: exosome (RNase complex) ||
10: nuclear exosome (RNase complex) || 11: transcriptionally active chromatin || 12: catalytic step 2 spliceosome || 13: nuclear speck || 14: U5 snRNP || 15: 6-phosphofructokinase complex || 16: intermediate filament cytoskeleton ||
17: chromosome || 18: Golgi stack || 19: coated pit || 20: endocytic vesicle || 21: lamellipodium || 22: neuron projection || 23: synapse || 24: vacuolar proton-transporting V-type ATPase, V1 domain || 25: cell cortex ||

Num of ECM Genes: 1. Num of Predicted Genes: 500



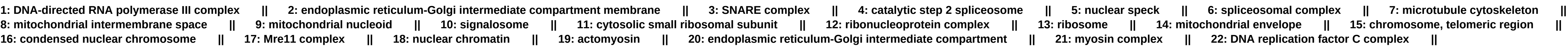
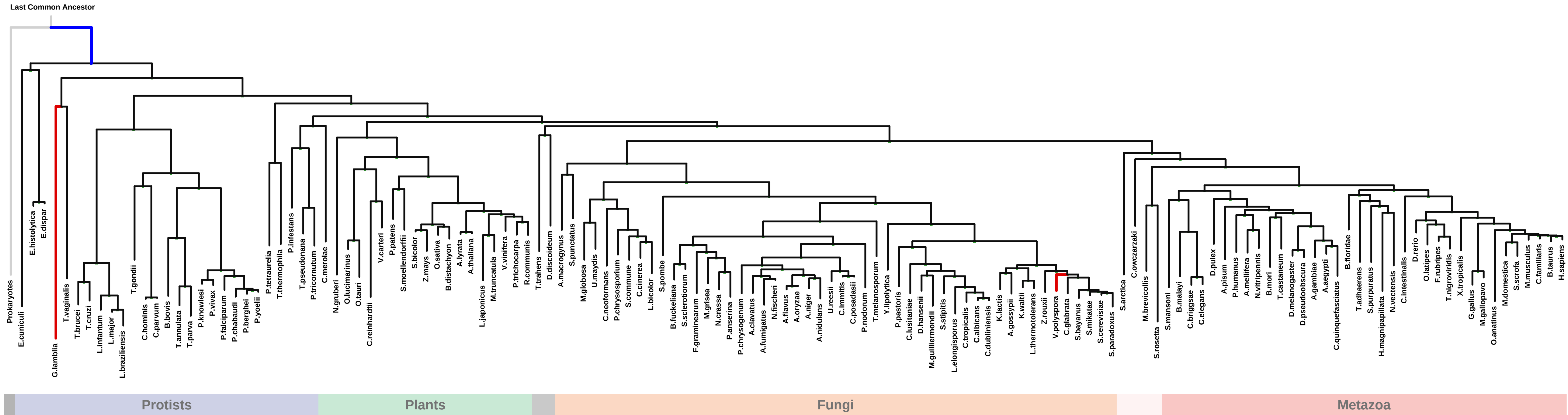
1: nuclear cyclin-dependent protein kinase holoenzyme complex || 2: nuclear speck || 3: basal plasma membrane || 4: integral to endoplasmic reticulum membrane || 5: Cajal body || 6: U7 snRNP || 7: cis-Golgi network || 8: endoplasmic reticulum-Golgi intermediate compartment || 9: cilium axoneme || 10: Golgi cisterna membrane || 11: neuron projection || 12: ruffle || 13: ruffle membrane || 14: trans-Golgi network || 15: Cdc73/Paf1 complex || 16: transcriptionally active chromatin || 17: CCR4-NOT complex || 18: cytoplasmic mRNA processing body || 19: aggresome || 20: inhibitory synapse || 21: postsynaptic membrane || 22: basolateral plasma membrane || 23: cell-cell junction || 24: membrane raft || 25: midbody || 26: transport vesicle ||

Num of ECM Genes: 1. Num of Predicted Genes: 500

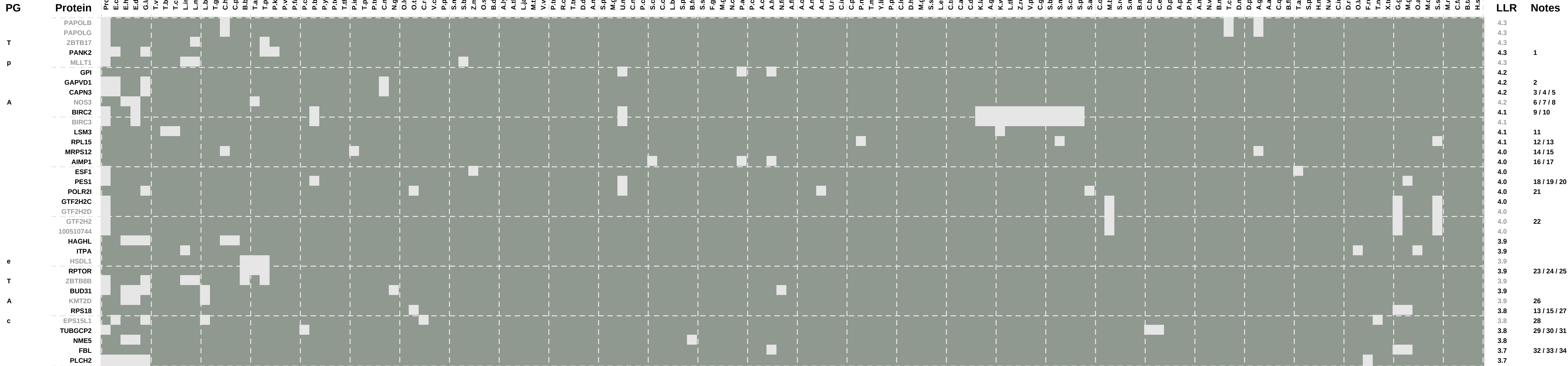


1: nucleosome || 2: nuclear membrane || 3: MCM complex || 4: chromosome || 5: cytoplasmic mRNA processing body || 6: MLL1 complex || 7: axon || 8: dendritic shaft || 9: synapse || 10: voltage-gated potassium channel complex ||
11: cytosolic small ribosomal subunit || 12: ribonucleoprotein complex || 13: PcG protein complex || 14: PML body || 15: XY body || 16: asymmetric synapse || 17: axonemal microtubule || 18: cytoplasmic membrane-bounded vesicle ||
19: cytoplasmic vesicle || 20: dendritic spine || 21: microtubule organizing center || 22: recycling endosome || 23: symmetric synapse || 24: trans-Golgi network || 25: nuclear matrix || 26: small nuclear ribonucleoprotein complex ||

Num of ECM Genes: 1. Num of Predicted Genes: 500

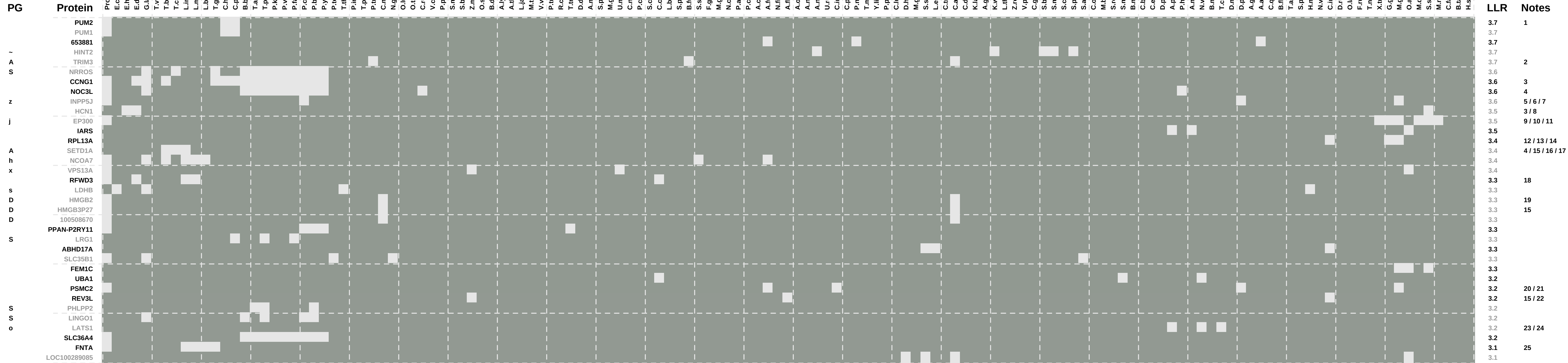


Num of ECM Genes: 1. Num of Predicted Genes: 500



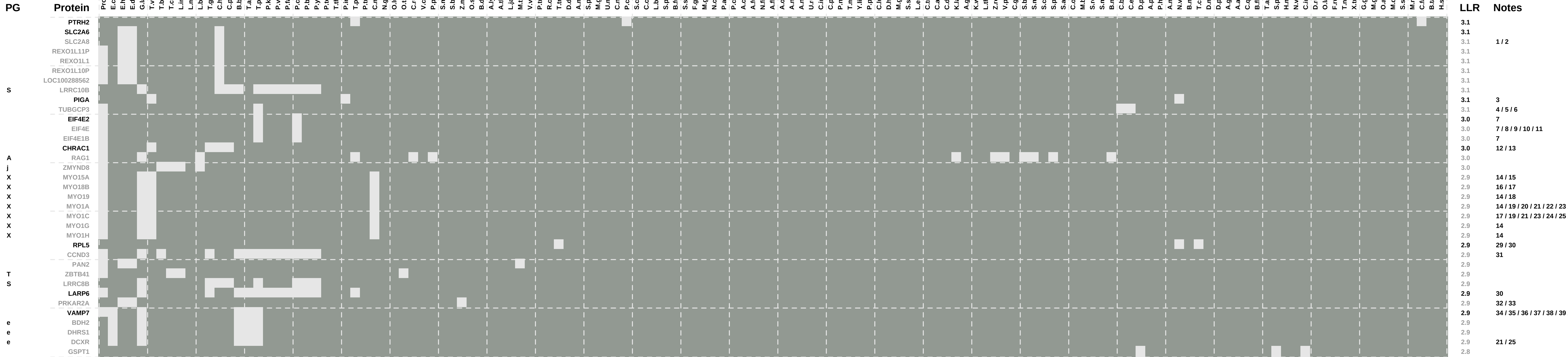
1: mitochondrial intermembrane space || 2: endosome || 3: myofibril || 4: T-tubule || 5: Z disc || 6: apical part of cell || 7: caveola || 8: endocytic vesicle membrane || 9: CD40 receptor complex || 10: internal side of plasma membrane ||
11: catalytic step 2 spliceosome || 12: cytosolic large ribosomal subunit || 13: ribosome || 14: mitochondrial ribosome || 15: small ribosomal subunit || 16: aminoacyl-tRNA synthetase multienzyme complex || 17: transport vesicle ||
18: condensed chromosome || 19: PeBoW complex || 20: preribosome, large subunit precursor || 21: DNA-directed RNA polymerase II, core complex || 22: holo TFIIF complex || 23: dendrite || 24: lysosome || 25: TORC1 complex ||

Num of ECM Genes: 1. Num of Predicted Genes: 500



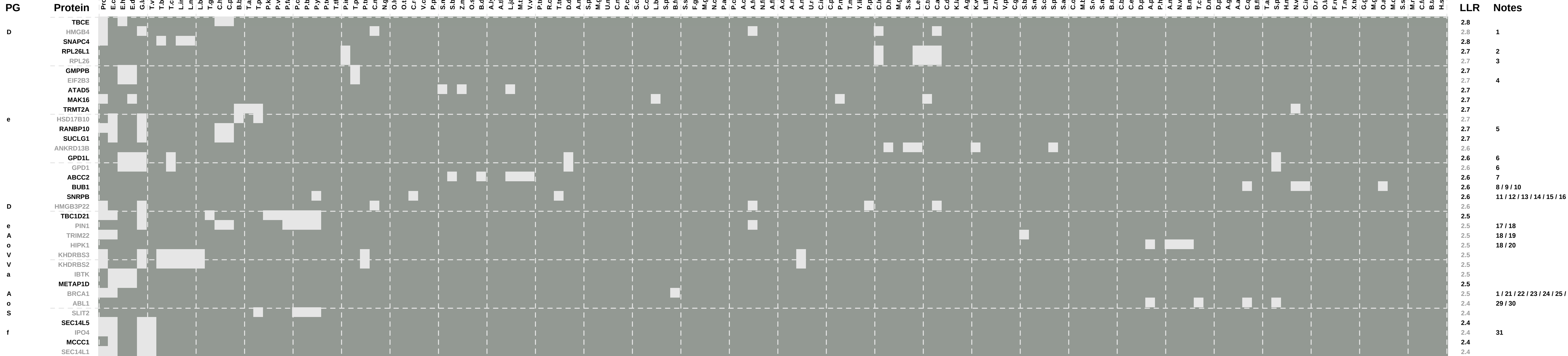
1: cytoplasmic stress granule || 2: early endosome || 3: dendrite || 4: nuclear speck || 5: dendritic shaft || 6: growth cone || 7: ruffle || 8: axon || 9: chromatin || 10: histone acetyltransferase complex || 11: protein-DNA complex || 12: cytosolic large ribosomal subunit || 13: large ribosomal subunit || 14: ribonucleoprotein complex || 15: chromosome || 16: histone methyltransferase complex || 17: Set1C/COMPASS complex || 18: PML body || 19: condensed chromosome || 20: proteasome accessory complex || 21: proteasome complex || 22: zeta DNA polymerase complex || 23: microtubule organizing center || 24: spindle pole || 25: microtubule associated complex

Num of ECM Genes: 1. Num of Predicted Genes: 500



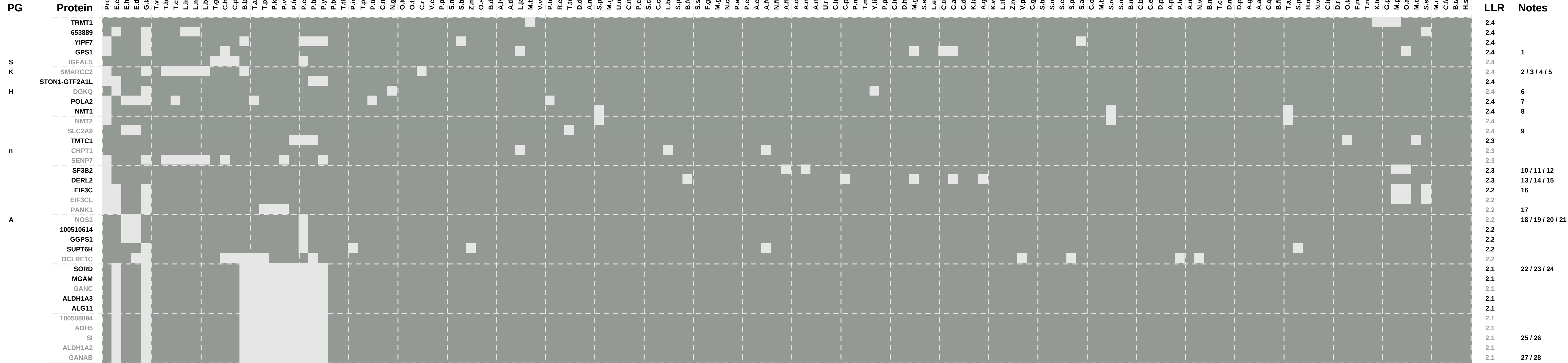
1: cytoplasmic vesicle membrane || 2: synaptic vesicle || 3: glycosylphosphatidylinositol-N-acetylglucosaminyltransferase (GPI-GnT) complex || 4: centriole || 5: polar microtubule || 6: spindle || 7: mRNA cap binding complex || 8: cytoplasmic mRNA processing body || 9: cytoplasmic stress granule || 10: eukaryotic translation initiation factor 4F complex || 11: RNA-induced silencing complex || 12: chromatin accessibility complex || 13: epsilon DNA polymerase complex || 14: myosin complex || 15: stereocilium || 16: sarcomere || 17: unconventional myosin complex || 18: mitochondrial outer membrane || 19: basal plasma membrane || 20: basolateral plasma membrane || 21: brush border ||

Num of ECM Genes: 1. Num of Predicted Genes: 500



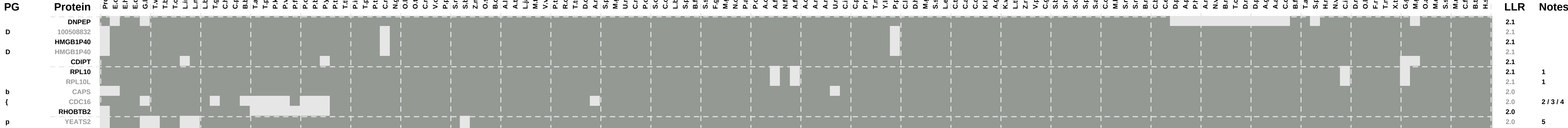
1: chromosome || 2: large ribosomal subunit || 3: cytosolic large ribosomal subunit || 4: eukaryotic translation initiation factor 2B complex || 5: cytoplasmic microtubule || 6: glycerol-3-phosphate dehydrogenase complex || 7: intercellular canaliculus ||
8: condensed chromosome kinetochore || 9: condensed nuclear chromosome, centromeric region || 10: kinetochore || 11: catalytic step 2 spliceosome || 12: histone pre-mRNA 3'end processing complex || 13: small nuclear ribonucleoprotein complex ||
14: spliceosomal complex || 15: U12-type spliceosomal complex || 16: U7 snRNP || 17: midbody || 18: nuclear speck || 19: Cajal body || 20: PML body || 21: BRCA1-A complex || 22: BRCA1-BARD1 complex || 23: filamentous actin ||

Num of ECM Genes: 1. Num of Predicted Genes: 500



1: signalosome || 2: nBAF complex || 3: npBAF complex || 4: SWI/SNF complex || 5: transcriptional repressor complex || 6: nuclear speck || 7: alpha DNA polymerase:primase complex || 8: actin cytoskeleton || 9: nuclear envelope || 10: catalytic step 2 spliceosome || 11: spliceosomal complex || 12: U12-type spliceosomal complex || 13: early endosome || 14: integral to endoplasmic reticulum membrane || 15: late endosome || 16: eukaryotic translation initiation factor 3 complex || 17: cell periphery || 18: dendritic spine || 19: photoreceptor inner segment || 20: sarcolemma || 21: sarcoplasmic reticulum || 22: cilium || 23: flagellum || 24: mitochondrial membrane || 25: brush border || 26: membrane raft ||

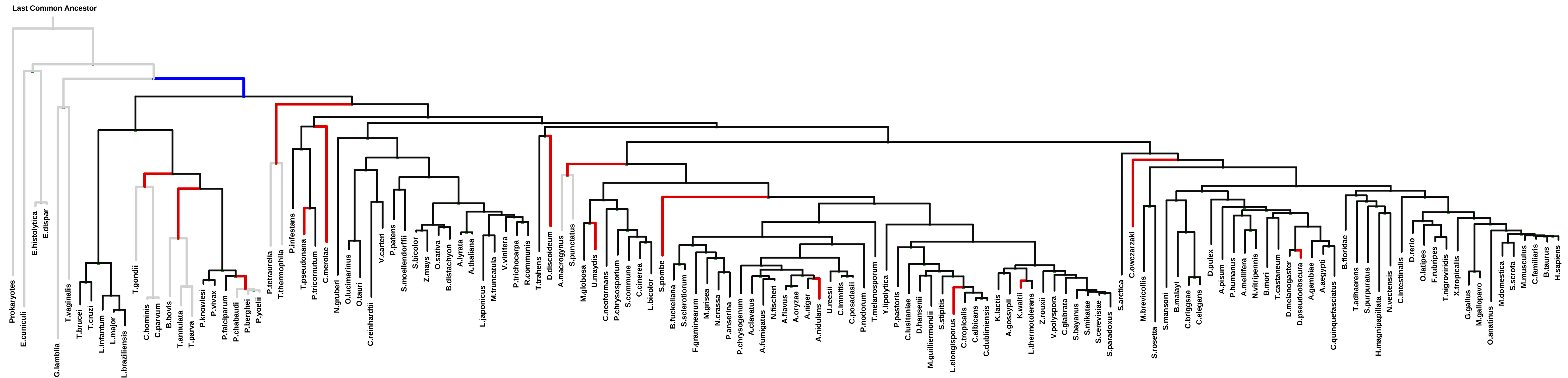
Num of ECM Genes: 1. Num of Predicted Genes: 500



1: cytosolic large ribosomal subunit || 2: anaphase-promoting complex || 3: spindle || 4: spindle microtubule || 5: Ada2/Gcn5/Ada3 transcription activator complex

ECM 5, Gene set "mitotic spindle", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 2

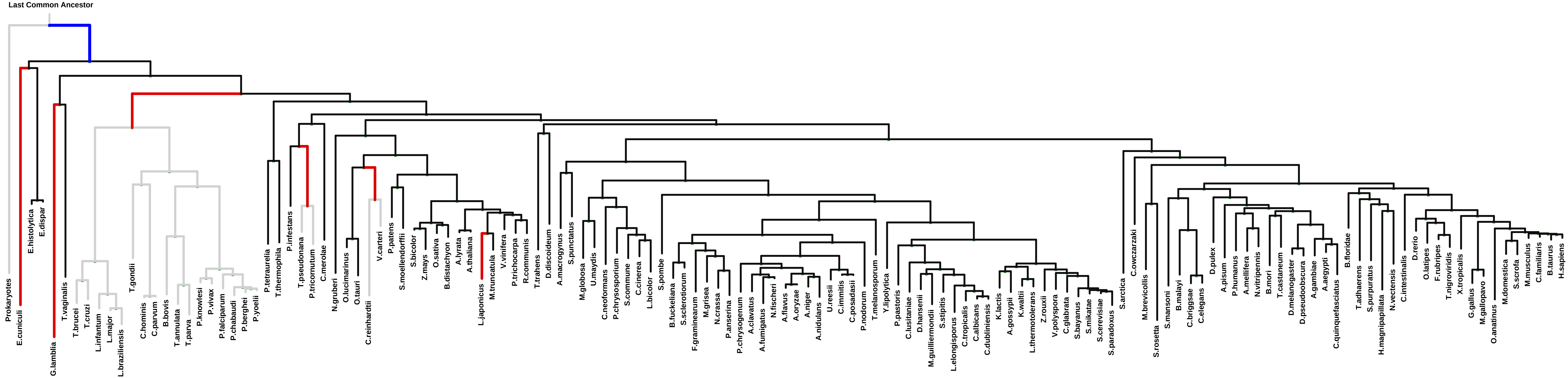


PG	Protein	Pro	E1	E2	E3	G1	T1	T2	T3	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	L18	L19	L20	L21	L22	L23	L24	L25	L26	L27	L28	L29	L30	L31	L32	L33	L34	L35	L36	L37	L38	L39	L40	L41	L42	L43	L44	L45	L46	L47	L48	L49	L50	L51	L52	L53	L54	L55	L56	L57	L58	L59	L60	L61	L62	L63	L64	L65	L66	L67	L68	L69	L70	L71	L72	L73	L74	L75	L76	L77	L78	L79	L80	L81	L82	L83	L84	L85	L86	L87	L88	L89	L90	L91	L92	L93	L94	L95	L96	L97	L98	L99	L100	L101	L102	L103	L104	L105	L106	L107	L108	L109	L110	L111	L112	L113	L114	L115	L116	L117	L118	L119	L120	L121	L122	L123	L124	L125	L126	L127	L128	L129	L130	L131	L132	L133	L134	L135	L136	L137	L138	L139	L140	L141	L142	L143	L144	L145	L146	L147	L148	L149	L150	L151	L152	L153	L154	L155	L156	L157	L158	L159	L160	L161	L162	L163	L164	L165	L166	L167	L168	L169	L170	L171	L172	L173	L174	L175	L176	L177	L178	L179	L180	L181	L182	L183	L184	L185	L186	L187	L188	L189	L190	L191	L192	L193	L194	L195	L196	L197	L198	L199	L200	L201	L202	L203	L204	L205	L206	L207	L208	L209	L210	L211	L212	L213	L214	L215	L216	L217	L218	L219	L220	L221	L222	L223	L224	L225	L226	L227	L228	L229	L230	L231	L232	L233	L234	L235	L236	L237	L238	L239	L240	L241	L242	L243	L244	L245	L246	L247	L248	L249	L250	L251	L252	L253	L254	L255	L256	L257	L258	L259	L260	L261	L262	L263	L264	L265	L266	L267	L268	L269	L270	L271	L272	L273	L274	L275	L276	L277	L278	L279	L280	L281	L282	L283	L284	L285	L286	L287	L288	L289	L290	L291	L292	L293	L294	L295	L296	L297	L298	L299	L300	L301	L302	L303	L304	L305	L306	L307	L308	L309	L310	L311	L312	L313	L314	L315	L316	L317	L318	L319	L320	L321	L322	L323	L324	L325	L326	L327	L328	L329	L330	L331	L332	L333	L334	L335	L336	L337	L338	L339	L340	L341	L342	L343	L344	L345	L346	L347	L348	L349	L350	L351	L352	L353	L354	L355	L356	L357	L358	L359	L360	L361	L362	L363	L364	L365	L366	L367	L368	L369	L370	L371	L372	L373	L374	L375	L376	L377	L378	L379	L380	L381	L382	L383	L384	L385	L386	L387	L388	L389	L390	L391	L392	L393	L394	L395	L396	L397	L398	L399	L400	L401	L402	L403	L404	L405	L406	L407	L408	L409	L410	L411	L412	L413	L414	L415	L416	L417	L418	L419	L420	L421	L422	L423	L424	L425	L426	L427	L428	L429	L430	L431	L432	L433	L434	L435	L436	L437	L438	L439	L440	L441	L442	L443	L444	L445	L446	L447	L448	L449	L450	L451	L452	L453	L454	L455	L456	L457	L458	L459	L460	L461	L462	L463	L464	L465	L466	L467	L468	L469	L470	L471	L472	L473	L474	L475	L476	L477	L478	L479	L480	L481	L482	L483	L484	L485	L486	L487	L488	L489	L490	L491	L492	L493	L494	L495	L496	L497	L498	L499	L500	L501	L502	L503	L504	L505	L506	L507	L508	L509	L510	L511	L512	L513	L514	L515	L516	L517	L518	L519	L520	L521	L522	L523	L524	L525	L526	L527	L528	L529	L530	L531	L532	L533	L534	L535	L536	L537	L538	L539	L540	L541	L542	L543	L544	L545	L546	L547	L548	L549	L550	L551	L552	L553	L554	L555	L556	L557	L558	L559	L560	L561	L562	L563	L564	L565	L566	L567	L568	L569	L570	L571	L572	L573	L574	L575	L576	L577	L578	L579	L580	L581	L582	L583	L584	L585	L586	L587	L588	L589	L590	L591	L592	L593	L594	L595	L596	L597	L598	L599	L600	L601	L602	L603	L604	L605	L606	L607	L608	L609	L610	L611	L612	L613	L614	L615	L616	L617	L618	L619	L620	L621	L622	L623	L624	L625	L626	L627	L628	L629	L630	L631	L632	L633	L634	L635	L636	L637	L638	L639	L640	L641	L642	L643	L644	L645	L646	L647	L648	L649	L650	L651	L652	L653	L654	L655	L656	L657	L658	L659	L660	L661	L662	L663	L664	L665	L666	L667	L668	L669	L670	L671	L672	L673	L674	L675	L676	L677	L678	L679	L680	L681	L682	L683	L684	L685	L686	L687	L688	L689	L690	L691	L692	L693	L694	L695	L696	L697	L698	L699	L700	L701	L702	L703	L704	L705	L706	L707	L708	L709	L710	L711	L712	L713	L714	L715	L716	L717	L718	L719	L720	L721	L722	L723	L724	L725	L726	L727	L728	L729	L730	L731	L732	L733	L734	L735	L736	L737	L738	L739	L740	L741	L742	L743	L744	L745	L746	L747	L748	L749	L750	L751	L752	L753	L754	L755	L756	L757	L758	L759	L760	L761	L762	L763	L764	L765	L766	L767	L768	L769	L770	L771	L772	L773	L774	L775	L776	L777	L778	L779	L780	L781	L782	L783	L784	L785	L786	L787	L788	L789	L790	L791	L792	L793	L794	L795	L796	L797	L798	L799	L800	L801	L802	L803	L804	L805	L806	L807	L808	L809	L810	L811	L812	L813	L814	L815	L816	L817	L818	L819	L820	L821	L822	L823	L824	L825	L826	L827	L828	L829	L830	L831	L832	L833	L834	L835	L836	L837	L838	L839	L840	L841	L842	L843	L844	L845	L846	L847	L848	L849	L850	L851	L852	L853	L854	L855	L856	L857	L858	L859	L860	L861	L862	L863	L864	L865	L866	L867	L868	L869	L870	L871	L872	L873	L874	L875	L876	L877	L878	L879	L880	L881	L882	L883	L884	L885	L886	L887	L888	L889	L890	L891	L892	L893	L894	L895	L896	L897	L898	L899	L900	L901	L902	L903	L904	L905	L906	L907	L908	L909	L910	L911	L912	L913	L914	L915	L916	L917	L918	L919	L920	L921	L922	L923	L924	L925	L926	L927	L928	L929	L930	L931	L932	L933	L934	L935	L936	L937	L938	L939	L940	L941	L942	L943	L944	L945	L946	L947	L948	L949	L950	L951	L952	L953	L954	L955	L956	L957	L958	L959	L960	L961	L962	L963	L964	L965	L966	L967	L968	L969	L970	L971	L972	L973	L974	L975	L976	L977	L978	L979	L980	L981	L982	L983	L984	L985	L986	L987	L988	L989	L990	L991	L992	L993	L994	L995	L996	L997	L998	L999	L1000
A	PKP4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			</																																																																																																																																																																																																																																																																																																													

LLR	Notes
	1/2/3/4/5/6/7
12.2	1/2
7.0	8/9/10

ECM 6, Gene set "mitotic spindle", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 500



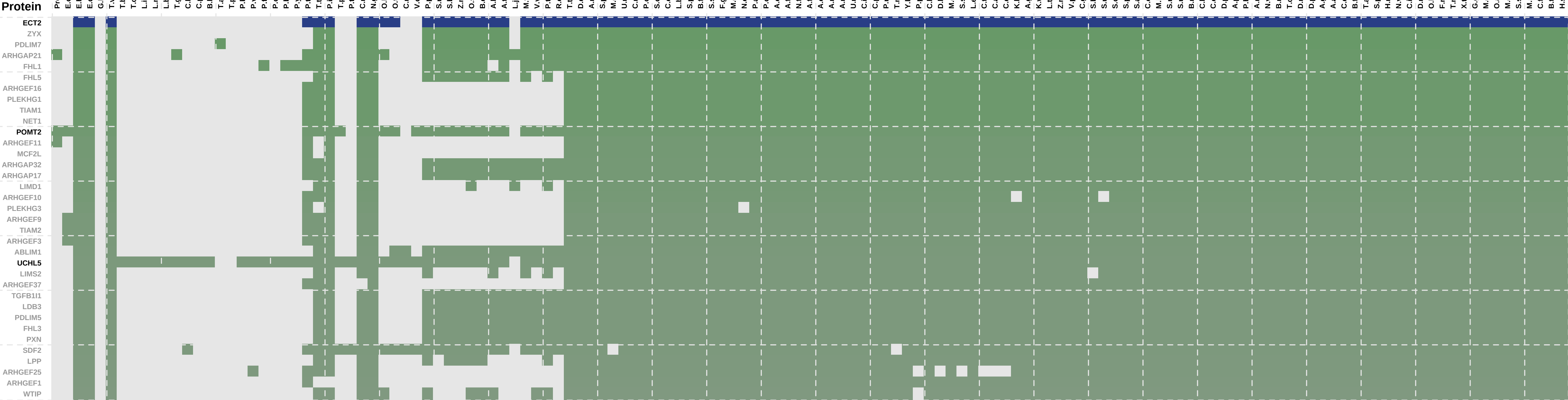
Protists

Plants

Fungi

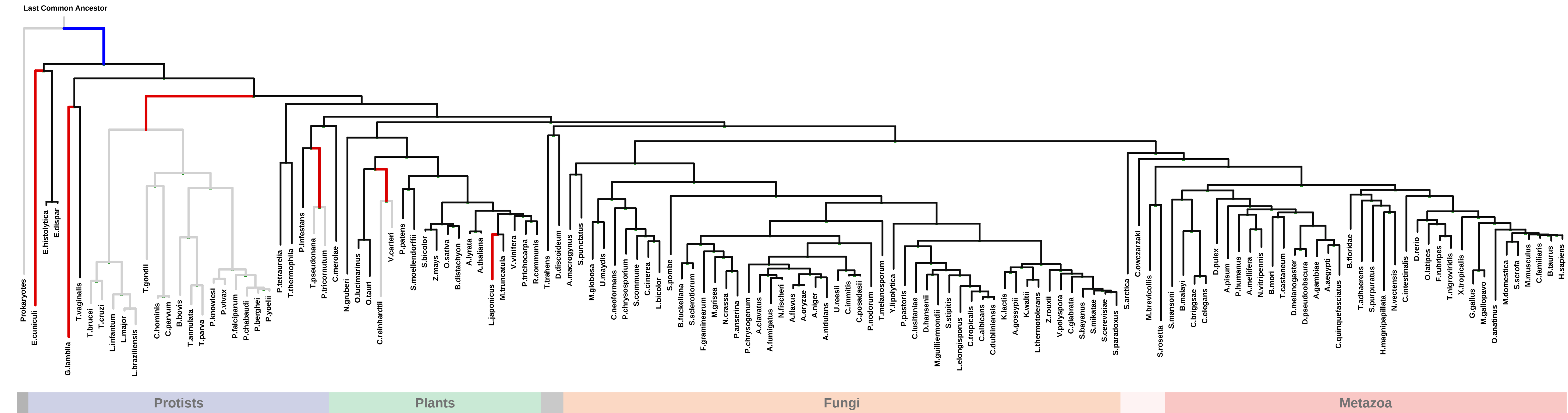
Metazoa

PG



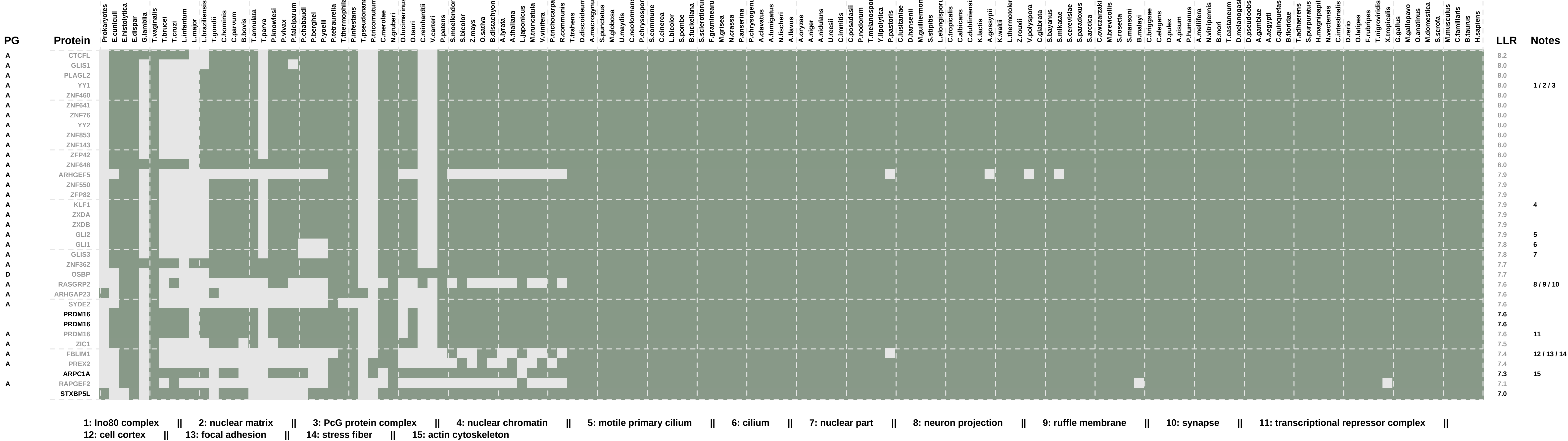
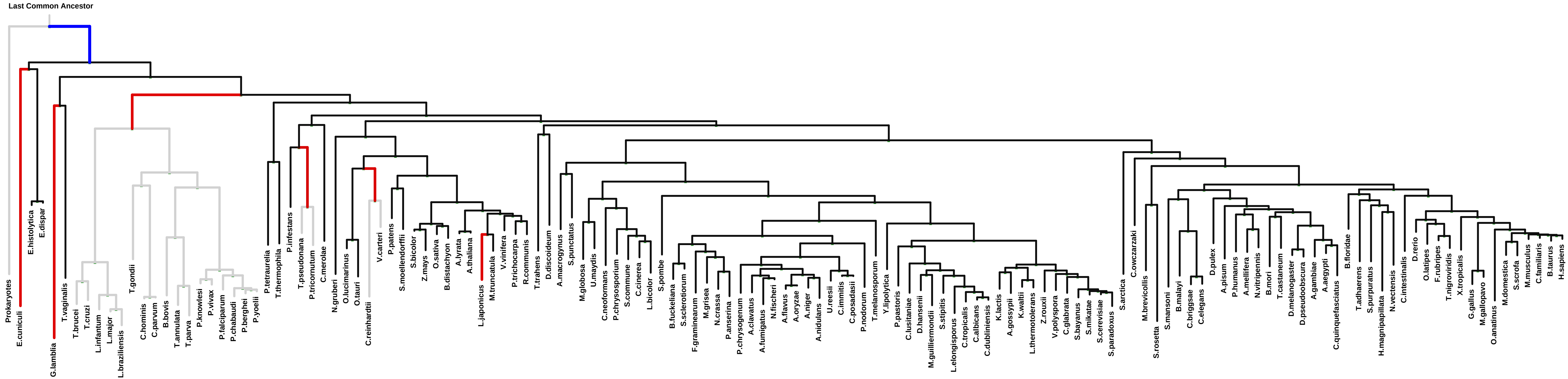
1: cell-cell junction 2: centralspindlin complex 3: cleavage furrow 4: midbody 5: mitotic spindle 6: tight junction 7: cell-cell adherens junction 8: focal adhesion 9: stress fiber 10: actin cytoskeleton 11: ruffle 12: cytoplasmic vesicle membrane 13: lamellipodium 14: cell cortex 15: endosome membrane 16: postsynaptic density 17: postsynaptic membrane 18: adherens junction 19: cytoplasmic mRNA processing body 20: RNA-induced silencing complex 21: filopodium 22: growth cone 23: Ino80 complex 24: proteasome complex 25: extracellular matrix 26: nuclear matrix 27: pseudopodium 28: Z disc 29: microtubule associated complex

Num of ECM Genes: 1. Num of Predicted Genes: 500

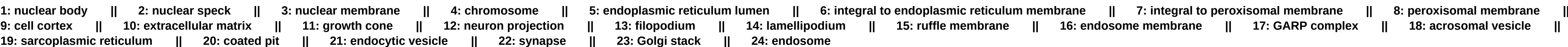
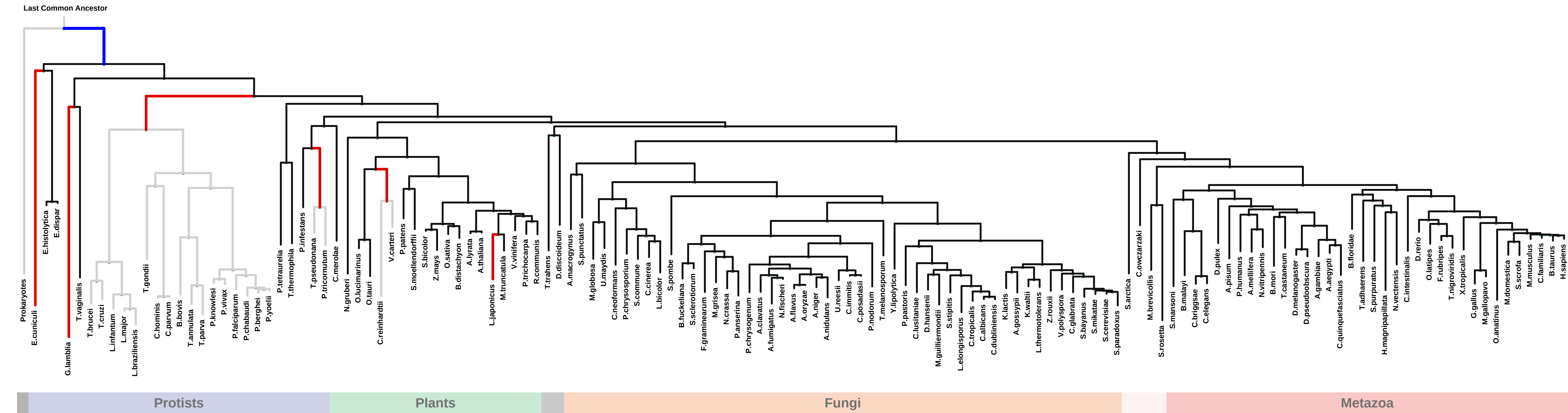


ECM 6, Gene set "mitotic spindle", Page 3

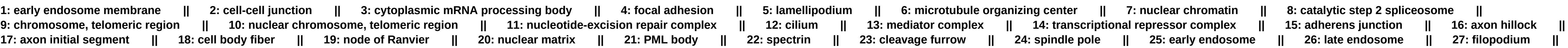
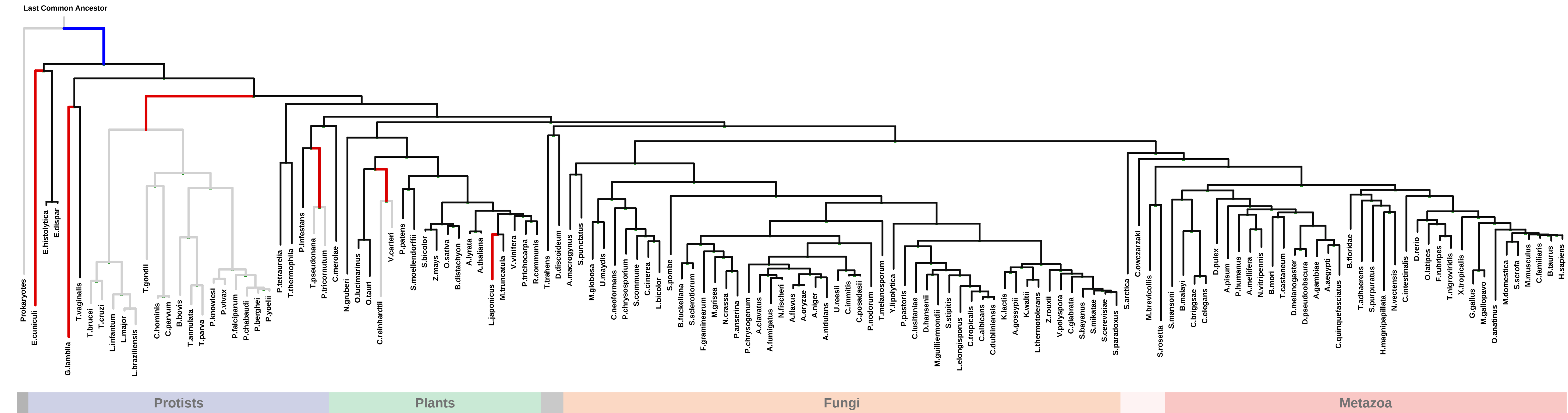
Num of ECM Genes: 1. Num of Predicted Genes: 500



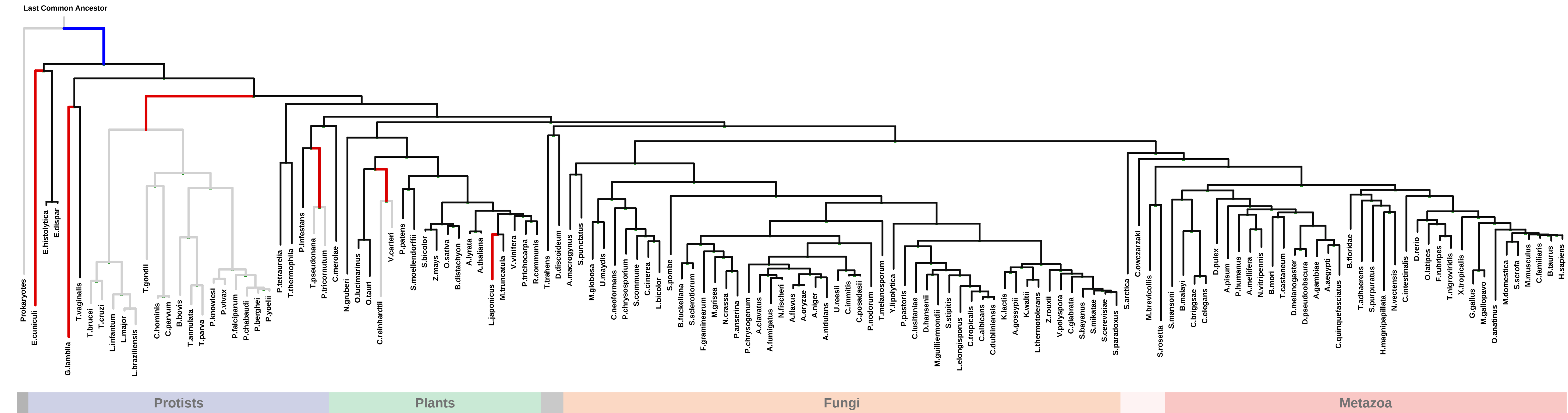
Num of ECM Genes: 1. Num of Predicted Genes: 500



Num of ECM Genes: 1. Num of Predicted Genes: 500

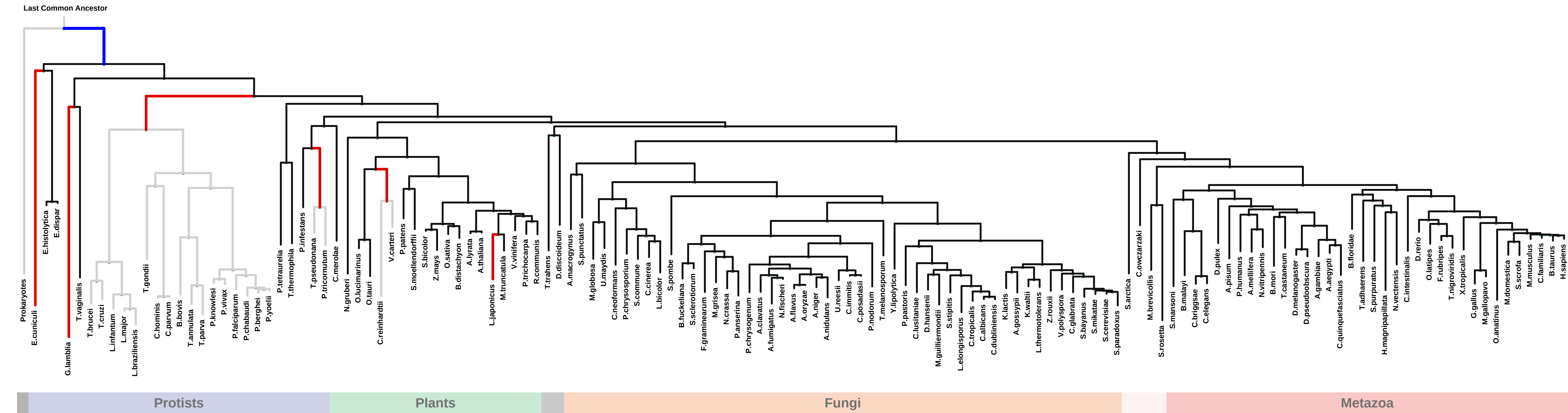


Num of ECM Genes: 1. Num of Predicted Genes: 500



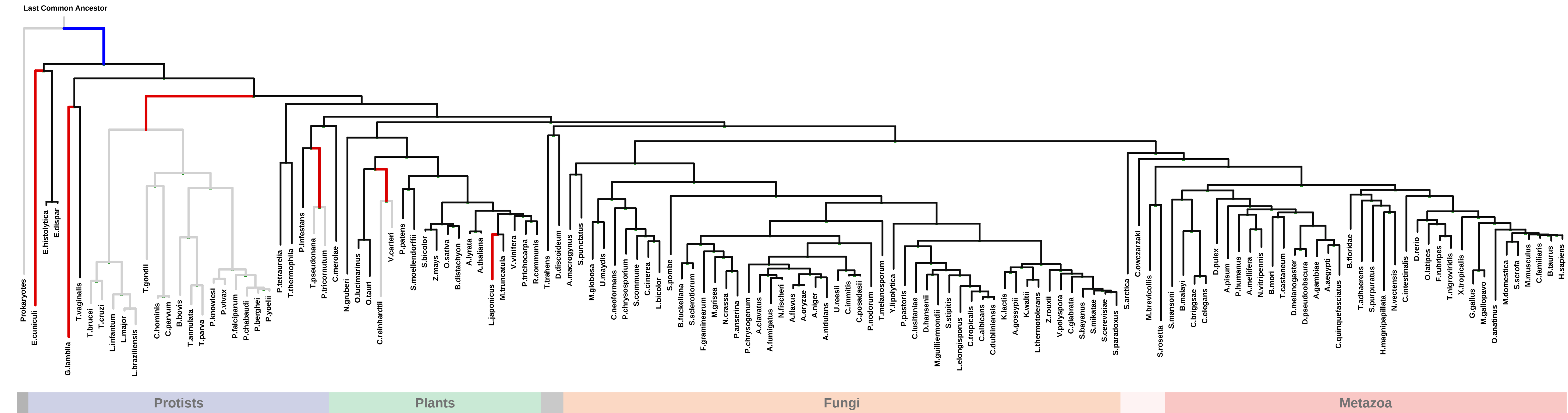
1: integral to peroxisomal membrane || 2: peroxisomal membrane || 3: peroxisome || 4: cilium || 5: flagellum || 6: mitochondrial outer membrane || 7: mitochondrial nucleoid || 8: MMXD complex || 9: mitochondrial inner membrane presequence translocase complex

Num of ECM Genes: 1. Num of Predicted Genes: 500

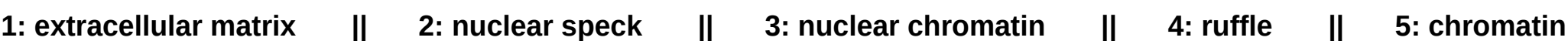
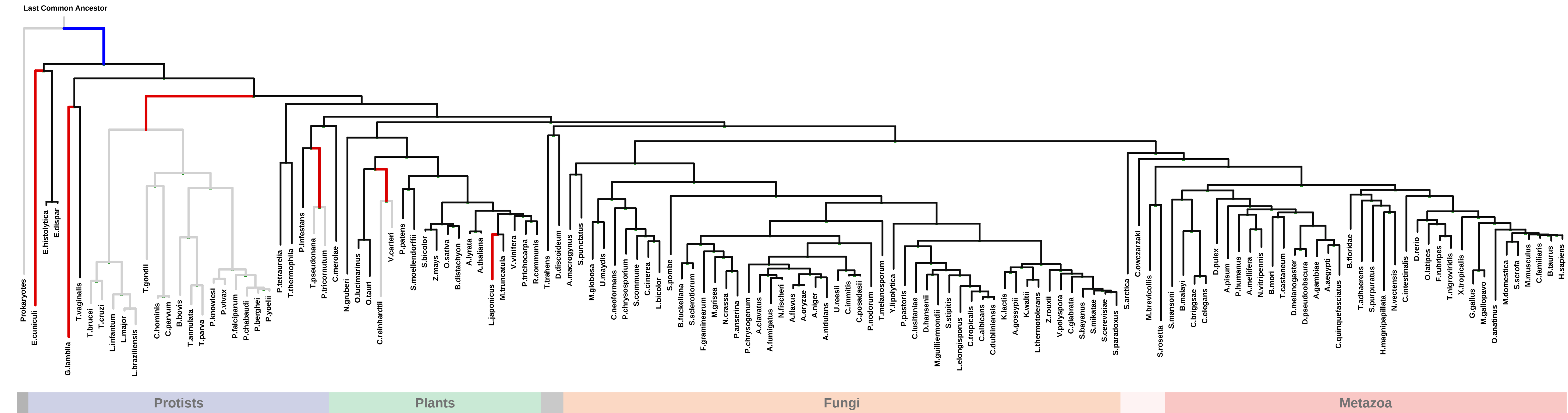


1: peroxisome || 2: late endosome membrane || 3: eukaryotic translation initiation factor 2 complex || 4: catalytic step 2 spliceosome || 5: small nuclear ribonucleoprotein complex || 6: spliceosomal complex || 7: U12-type spliceosomal complex

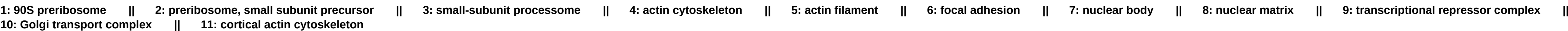
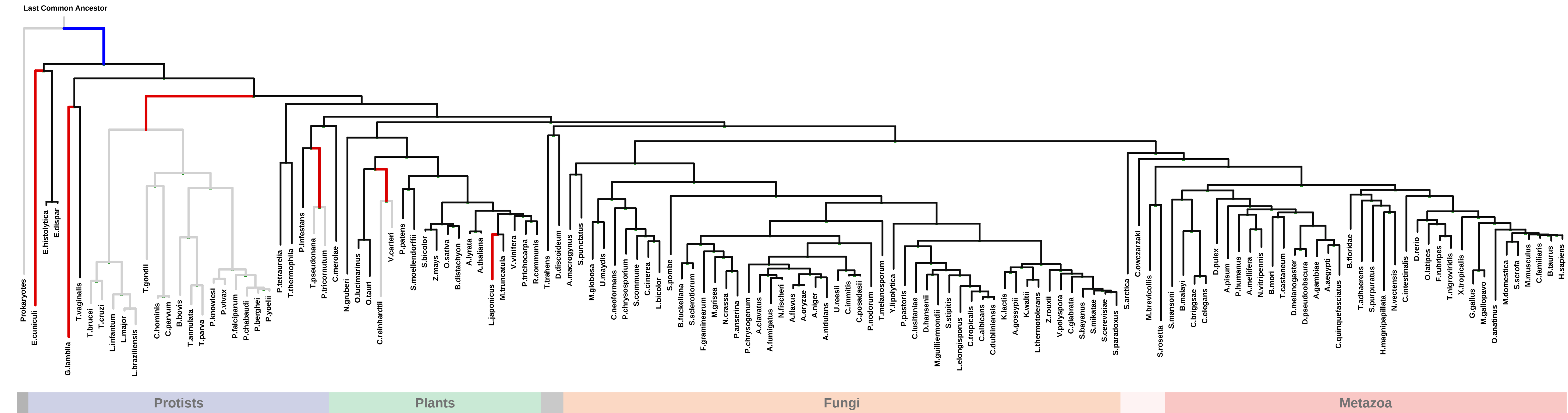
Num of ECM Genes: 1. Num of Predicted Genes: 500



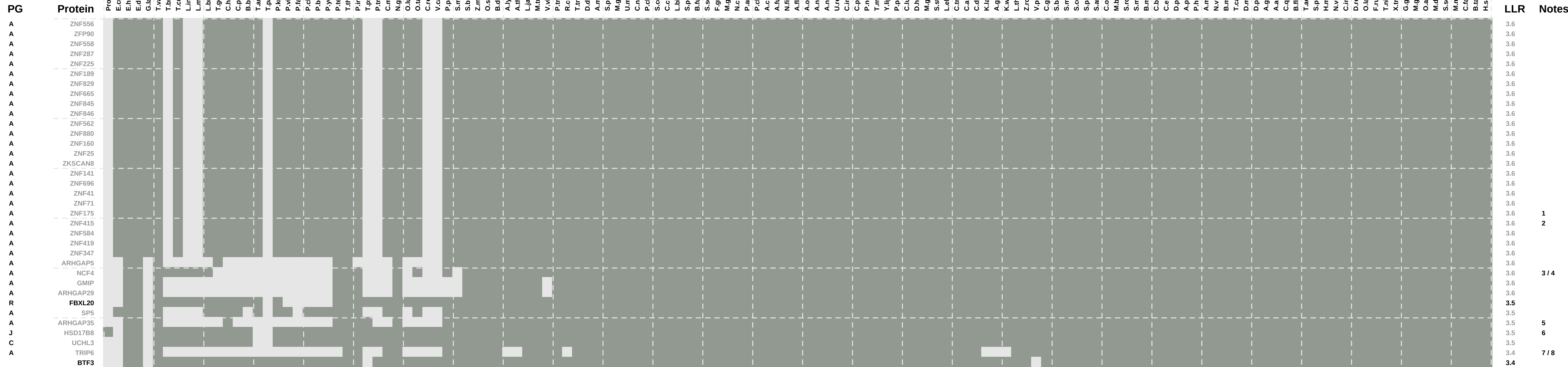
Num of ECM Genes: 1. Num of Predicted Genes: 500



Num of ECM Genes: 1. Num of Predicted Genes: 500



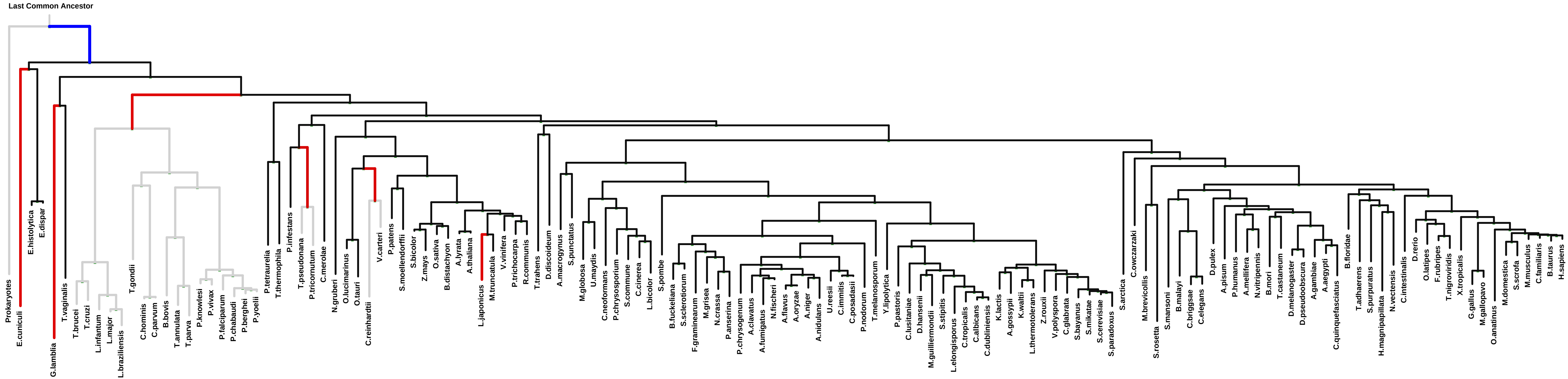
Num of ECM Genes: 1. Num of Predicted Genes: 500



3.6	1
3.6	2
3.6	
3.6	
3.6	
3.6	3 / 4
3.6	
3.5	
3.5	
3.5	5
3.5	6
3.5	
3.4	7 / 8
3.4	

ECM 6, Gene set "mitotic spindle", Page 12

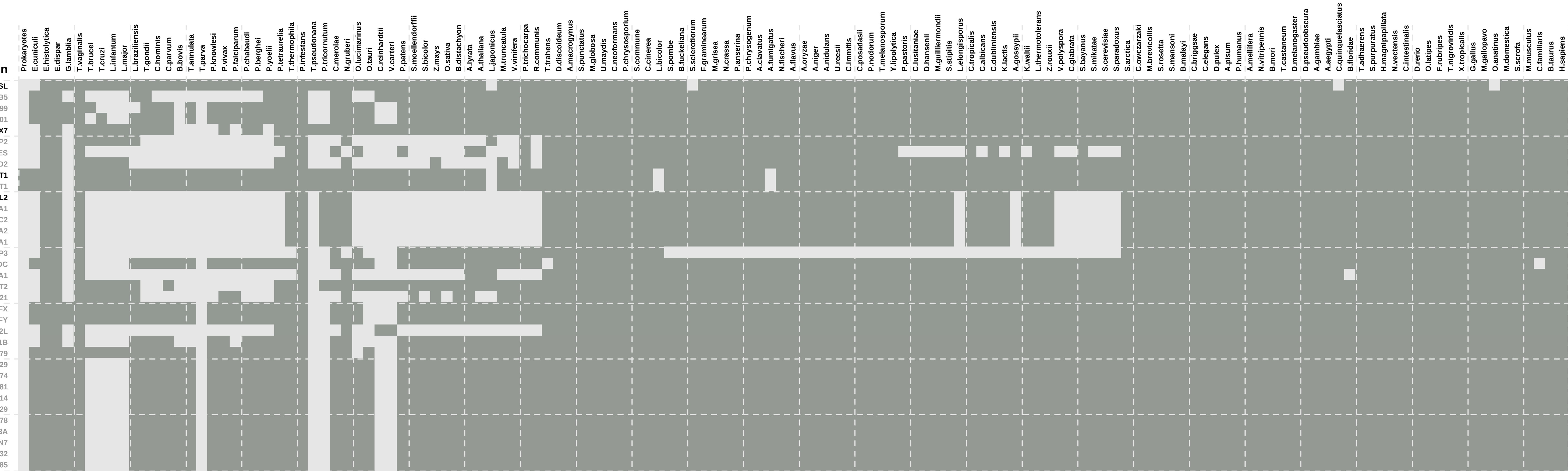
Num of ECM Genes: 1. Num of Predicted Genes: 500



PG		Protein	ProtistsPlantsFungiMetazoa																				LLR	Notes
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		ZNF223																					3.3	
		PEX13																					3.3	1 / 2 / 3
		PRDM10																					3.3	
		ZNF276																					3.3	
E	S	LSM10																					3.2	4 / 5
		SLC27A5																					3.2	6 / 7
		AHCY																					3.2	8
		AHCYL1																					3.2	
		DBR1																					3.2	
S	A	AHCYL2																					3.2	
		ZNF555																					3.2	
		ZNF14																					3.2	
		ZNF791																					3.2	
		ZNF600																					3.2	
A	A	ZNF548																					3.2	
		ZFP28																					3.2	
		ZNF816																					3.2	
		ZNF260																					3.2	
		ZNF732																					3.2	
T	A	PANK2																					3.1	9
		PANK1																					3.1	10
		ZNF616																					3.0	
		OSBPL8																					3.0	
		OSBPL5																					3.0	
O	A	REV1																					3.0	
		ARHGAP11A																					2.9	
		DDB1																					2.9	
		100290337																					2.9	11 / 12 / 13
		643856																					2.9	
A	A	RAPGEF6																					2.9	
		PTPLAD1																					2.8	
		SPTB																					2.8	14 / 15 / 16 / 17
		ATP6V1E1																					2.7	18 / 19 / 20 / 21
		ATP6V1E2																					2.7	21 / 22

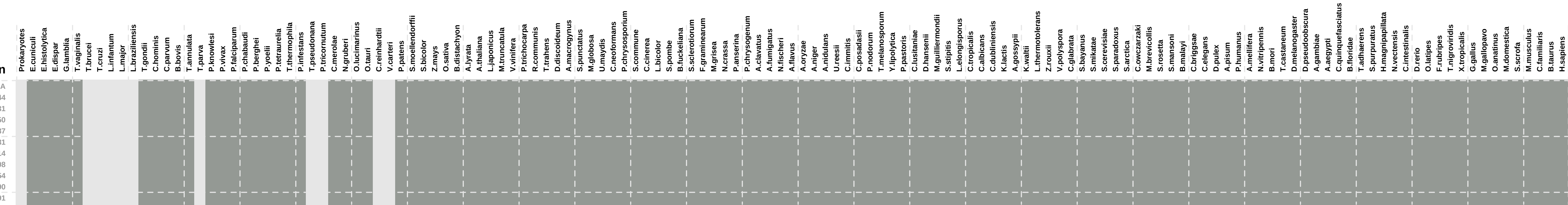
1: integral to peroxisomal membrane || 2: peroxisomal membrane || 3: peroxisome || 4: Cajal body || 5: U7 snRNP || 6: basal plasma membrane || 7: integral to endoplasmic reticulum membrane || 8: melanosome || 9: mitochondrial intermembrane space || 10: cell periphery || 11: Cul4A-RING ubiquitin ligase complex || 12: Cul4B-RING ubiquitin ligase complex || 13: Cul4-RING ubiquitin ligase complex || 14: actin cytoskeleton || 15: intrinsic to internal side of plasma membrane || 16: spectrin || 17: spectrin-associated cytoskeleton || 18: endosome || 19: microvillus || 20: proton-transporting two-sector ATPase complex || 21: proton-transporting two-sector ATPase complex, catalytic domain || 22: acrosomal vesicle

Num of ECM Genes: 1. Num of Predicted Genes: 500



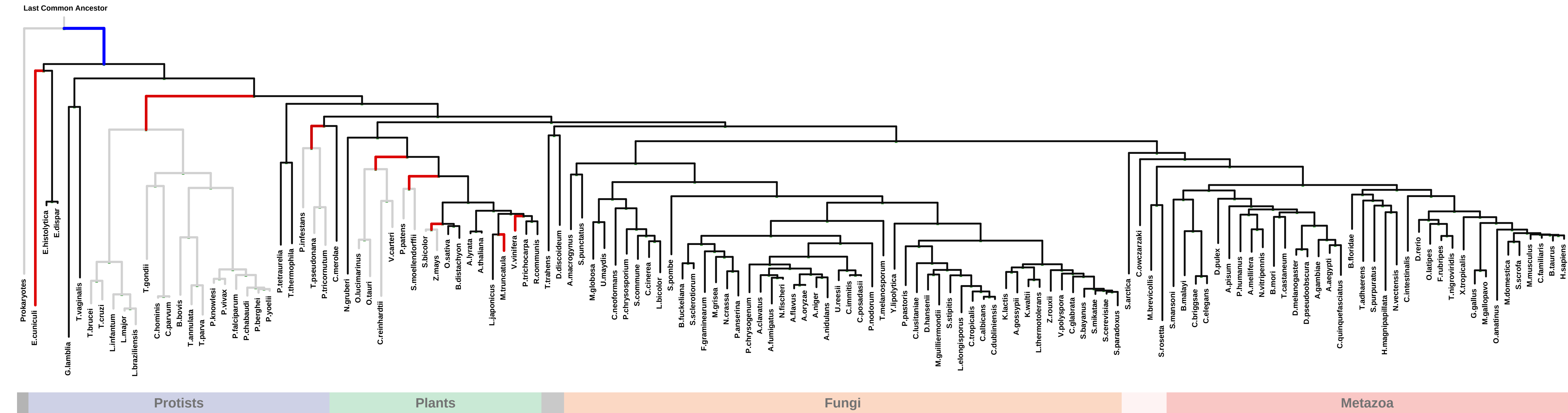
1: early endosome membrane || 2: late endosome membrane || 3: lysosomal membrane || 4: SNARE complex || 5: endosome || 6: focal adhesion || 7: nuclear membrane || 8: caveola || 9: cytoskeletal part || 10: dendrite || 11: growth cone || 12: TSC1-TSC2 complex || 13: endomembrane system || 14: intrinsic to internal side of plasma membrane || 15: ruffle

Num of ECM Genes: 1. Num of Predicted Genes: 500

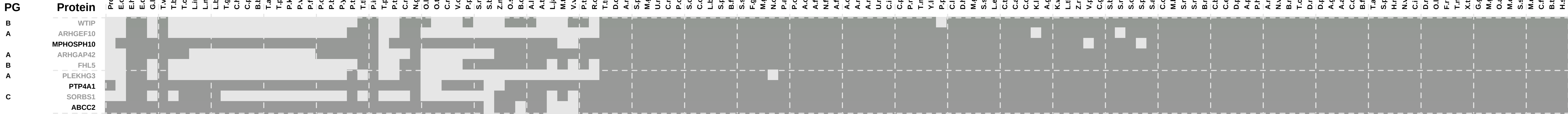


2.2
2.2
2.2
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2.2
2.2

Num of ECM Genes: 1. Num of Predicted Genes: 43



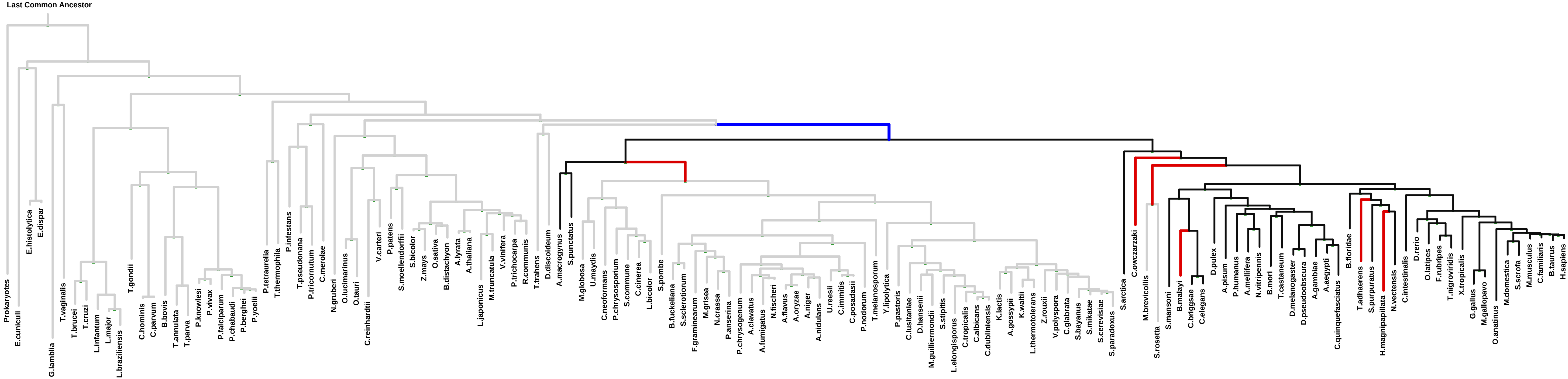
Num of ECM Genes: 1. Num of Predicted Genes: 43



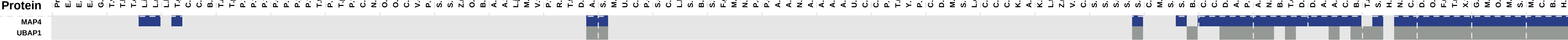
1: adherens junction || 2: cytoplasmic mRNA processing body || 3: chromosome || 4: small nucleolar ribonucleoprotein complex || 5: early endosome || 6: internal side of plasma membrane || 7: spindle || 8: cell-cell adherens junction || 9: cell-substrate adherens junction || 10: focal adhesion || 11: insulin receptor complex || 12: membrane raft || 13: stress fiber || 14: zonula adherens || 15: intercellular canaliculus

ECM 8, Gene set "mitotic spindle", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 1



PG



LLR

Notes

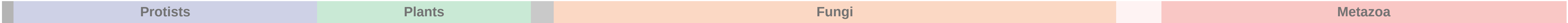
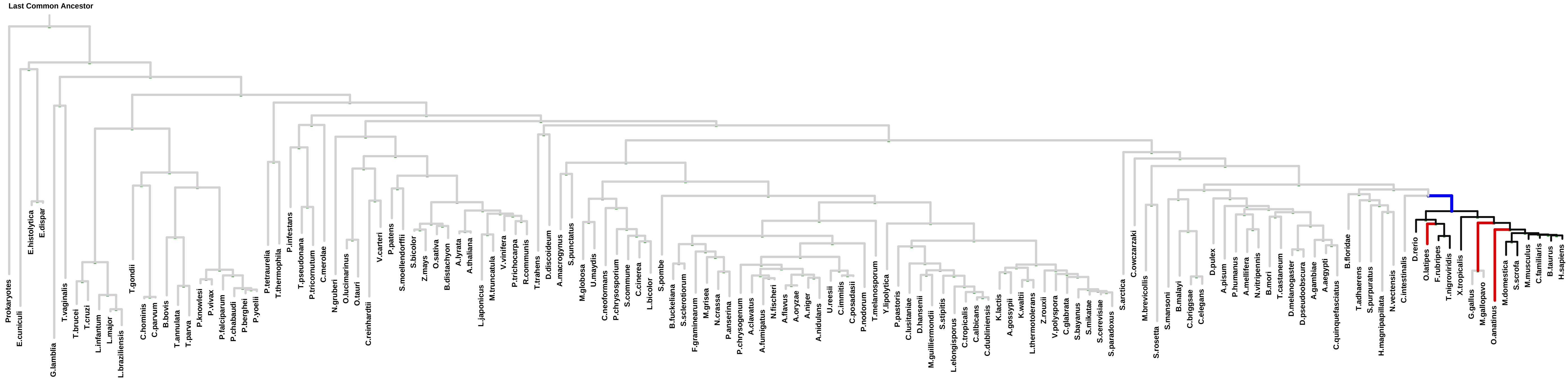
1.8

1 / 2 / 3

1: microtubule associated complex || 2: microtubule cytoskeleton || 3: mitotic spindle

ECM 9, Gene set "mitotic spindle", Page 1

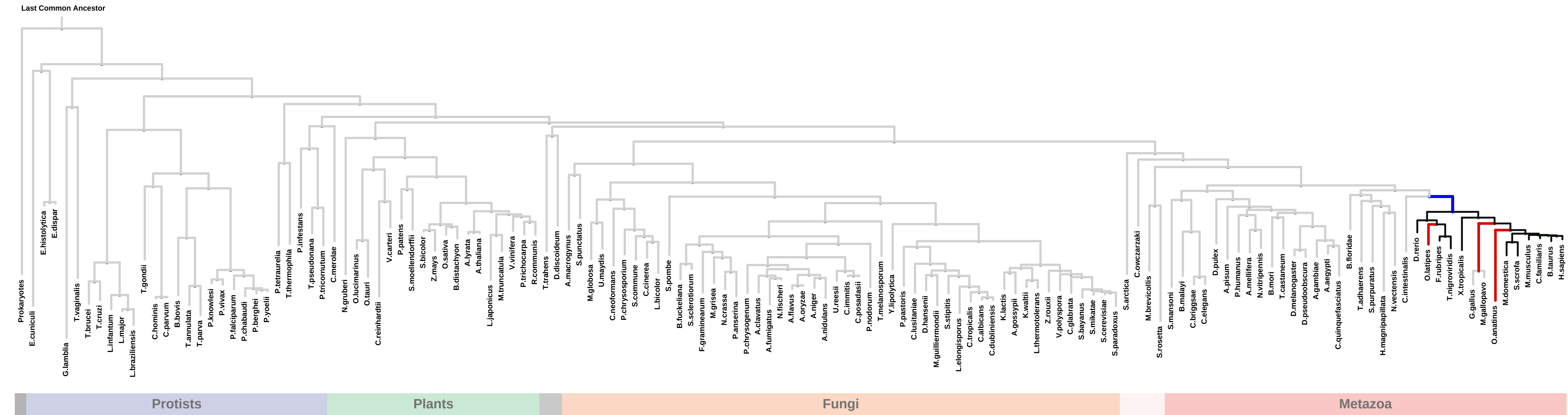
Num of ECM Genes: 1. Num of Predicted Genes: 52



PG	Protein	LLR	Notes
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	C1orf210	7.6	
	LOC646543	6.7	
	C11orf53	6.7	
	TMEM71	5.9	
	DEX1	5.8	
	C1orf51	5.8	
A	CAMK2N1	5.8	7 / 8
	NDUFA3	5.8	9
	NPW	5.8	
A	CAMK2N2	5.8	
	C19orf26	5.6	
	SMIM10	5.3	
	SYCN	5.3	10 / 11
	SMIM1	5.3	
	MARVELD1	5.0	
	PYDC1	5.0	12
	C1orf172	4.5	
	MGP	4.3	13 / 14
	PRRT3	4.2	
	APOF	4.1	15 / 16
	REP15	3.9	17
	SPACA4	3.5	18 / 19
B	LOC100294020	3.5	
B	LOC100294020	3.5	
C	LOC100129626	3.5	
C	TOMM5	3.5	
C	100510530	3.5	20
	C2orf80	3.5	
	BCL2L12	3.5	
	C1orf226	3.4	
	MLIP	3.4	21 / 22 / 23
	TCTA	3.4	
	ECM1	3.3	
	CD58	3.3	13 / 14
		3.1	19

1: condensed chromosome kinetochore || 2: kinetochore || 3: microtubule plus end || 4: mitotic spindle || 5: spindle microtubule || 6: spindle pole || 7: postsynaptic density || 8: postsynaptic membrane || 9: mitochondrial respiratory chain complex I ||
10: secretory granule membrane || 11: transport vesicle membrane || 12: IkappaB kinase complex || 13: extracellular matrix || 14: proteinaceous extracellular matrix || 15: high-density lipoprotein particle || 16: low-density lipoprotein particle ||
17: early endosome membrane || 18: acrosomal vesicle || 19: anchored to membrane || 20: mitochondrial outer membrane translocase complex || 21: nuclear envelope || 22: nuclear lumen || 23: PML body

Num of ECM Genes: 1. Num of Predicted Genes: 52

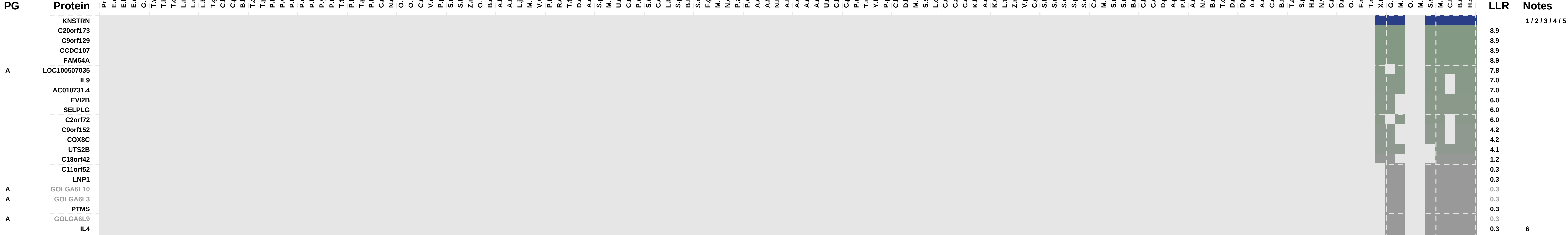
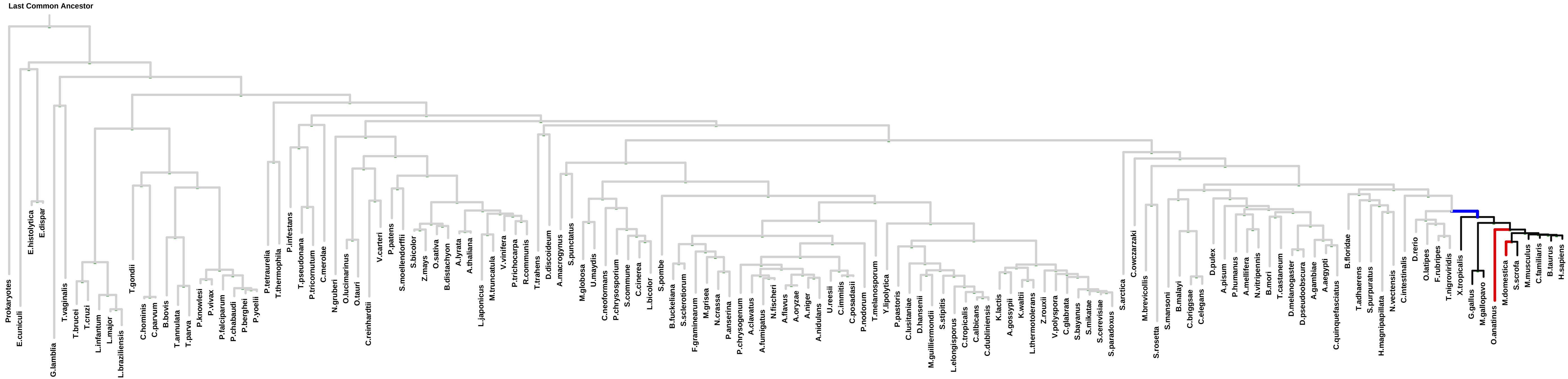


ion ||

transport vesicle

ECM 10, Gene set "mitotic spindle", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 21



1: condensed chromosome kinetochore || 2: kinetochore || 3: microtubule plus end || 4: mitotic spindle || 5: spindle pole || 6: external side of plasma membrane