

Table S2. Results showing the accuracy of our method using datasets with sequence identity threshold 70, 60, 50 and 40. Level-0 represents the model to predict if a protein sequence is an enzyme or not. Levels 1-4 represent corresponding levels of the EC number hierarchy.

***Correctly predicted:** Instances predicted by at least 2 of top 3 classifiers

EC Level CDH70	Number of sequences	Correctly Predicted*	% Overall accuracy	Classes	Model(s)
Level-0 (Enzymes)	193240 (64948)	188866 (62674)	97.74 (96.50)	2	1
Level-1	62674	62167	99.19	6	1
Level-2	62167	61721	99.28	51	6
Level-3	61721	60931	98.72	169	51
Level-4	60931	60199	98.80	1921	169

CDH 60 EC Level	Number of sequences	Correctly Predicted*	% Overall accuracy	Classes	Model(s)
Level-0 (Enzymes)	15198 46259	148181 44246	97.50 (95.65)	2	1
Level-1	44246	43875	99.17	6	1
Level-2	43875	43539	99.24	51	6
Level-3	43539	42947	98.64	163	51
Level-4	42947	42230	98.33	1808	163

CDH 50 EC Level	Number of sequences	Correctly Predicted*	% Overall accuracy	Classes	Model(s)
Level-0 (Enzymes)	115350 (29984)	112115 (28198)	97.20 (94.05)	2	1
Level-1	28198	27900	98.95	6	1
Level-2	27900	27647	99.10	51	6
Level-3	27647	27191	98.35	156	51
Level-4	27191	26665	98.07	1656	156

CDH 40 EC Level	Number of sequences	Correctly Predicted*	% Overall accuracy	Classes	Model(s)
Level-0 (Enzymes)	85944 (17998)	84071 (16936)	97.83 (94.10)	2	1
Level-1	16936	16686	98.53	6	1
Level-2	16686	16477	98.75	51	6
Level-3	16477	15989	97.04	142	51
Level-4	15989	15546	97.23	1453	142