

Table S5. Performance of prediction tools with PredictSNP benchmark dataset.

	MAPP	nsSNPAnalyzer	PANTHER	PhD-SNP	PPH-1	PPH-2	SIFT	SNAP	PredictSNP
True positives	14,580	7,225	5,392	13,741	12,491	16,025	15,357	11,324	14,666
False negatives	4,829	4,295	5,181	6,059	6,905	3,775	4,156	8,108	5,134
True negatives	12,828	2,016	10,377	19,196	17,225	14,281	15,230	18,229	18,131
False positives	6,307	1,149	3,026	4,886	6,722	9,798	7,867	5,827	5,951
Total	38,544	14,685	23,976	43,882	43,343	43,879	42,610	43,488	43,882
Sensitivity ^a	0.751	0.627	0.510	0.694	0.644	0.809	0.787	0.583	0.741
Specificity ^a	0.670	0.637	0.774	0.797	0.719	0.593	0.659	0.758	0.753
Precision ^a	0.695	0.633	0.693	0.774	0.696	0.665	0.698	0.706	0.750
NPV ^a	0.729	0.631	0.612	0.723	0.669	0.757	0.756	0.645	0.744
Accuracy ^a	0.711	0.632	0.642	0.746	0.682	0.701	0.723	0.670	0.747
MCC ^a	0.423	0.264	0.295	0.494	0.364	0.412	0.450	0.346	0.494
AUC ^a	0.773	0.634	0.692	0.812	0.695	0.776	0.784	0.732	0.808

PPH-1 – PolyPhen-1; PPH-2 – PolyPhen-2; NPV – negative predictive value; MCC – Matthews correlation coefficient; AUC – area under receiver operating characteristics curve; ^a – these metrics were calculated with normalized numbers