

Untitled

Yuwen

November 20, 2016

Study the effect of promoter, coding, and cg content on mutation rate. For promoters and coding windows, remove those that have “n/a” as gene names, for coding also remove utr5. Also have Noonan Roadmap brain union as a categorical variable

```
load("../analysis/161119_mutation_rate_calibration_with_Noonan_brain_roadmap_union_1bp_overlap.Rdata")
```

258 control

```
control_model_258_summary
```

##	Estimate	Std. Error	z value	Pr(> z)
## (Intercept)	0.26026351	0.1012956	2.5693462	1.018906e-02
## coding	0.11201464	0.1005227	1.1143219	2.651411e-01
## promoter	0.02038928	0.1375587	0.1482224	8.821672e-01
## cg	-1.94061738	0.2281548	-8.5057032	1.804982e-17
## epi	-0.47578490	0.1019272	-4.6678884	3.043111e-06

manuscript cases

```
ASD_model_manuscript_summary
```

##	Estimate	Std. Error	z value	Pr(> z)
## (Intercept)	0.04352114	0.07497748	0.5804561	0.561607053
## coding	0.20557270	0.06546487	3.1401987	0.001688333
## promoter	-0.18072193	0.09257602	-1.9521462	0.050920845
## cg	-0.52275811	0.16035194	-3.2600673	0.001113858
## epi	-0.06222118	0.06074443	-1.0243109	0.305688442

manuscript control

```
control_model_693_summary
```

##	Estimate	Std. Error	z value	Pr(> z)
## (Intercept)	-0.2296226	0.06008929	-3.821356	1.327201e-04
## coding	0.3651675	0.05103813	7.154797	8.379686e-13
## promoter	-0.1057078	0.07020794	-1.505639	1.321598e-01
## cg	-0.9055296	0.12971112	-6.981126	2.928242e-12
## epi	0.2131422	0.04624039	4.609437	4.037599e-06

scherrer cases, partly overlapped with manuscript cases

ASD_model_Scherer_summary

##	Estimate	Std. Error	z value	Pr(> z)
## (Intercept)	-0.10585776	0.10474509	-1.010623	3.121970e-01
## coding	0.38681938	0.08656093	4.468753	7.867706e-06
## promoter	-0.33053826	0.13707919	-2.411294	1.589602e-02
## cg	-0.75700904	0.22552699	-3.356623	7.890066e-04
## epi	0.03975494	0.08354405	0.475856	6.341769e-01