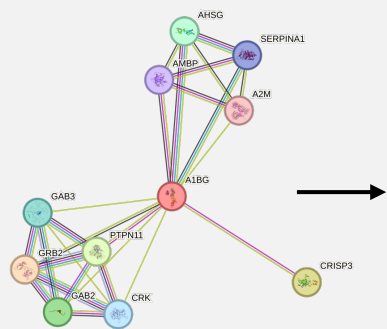


A

Protein network based gene-set



| GeneSet | Desc | Genes |
|---------|------|---|
| A1BG | A1BG | A1BG, GRB2, CRISP3, PTPN11, GAB2, AHSG, CRK, SERPINA1, AMBP, A2M, TF |
| A1CF | A1CF | A1CF, APOBEC1, APOB, APOBEC3F, APOBEC3G, SYNCRIP, APOBEC4, APOBEC2, APOBEC3H, APOBEC3A, CDA |
| A2M | A2M | A2M, APOA1, LRP1, HP, KLK4, IL1B, ALB, SERPINA1, APOE, HSPA5, SERPINF2 |
| ... | ... | ... |

B

SAIGE-GENE+

Genotype Phenotype

| Gene | P-value |
|------|---------|
| A1BG | 0.1644 |
| A1CF | 0.9786 |
| A2M | 0.8674 |
| ... | ... |

C

GAUSS

| GeneSet | Desc | Genes |
|---------|------|---|
| A1BG | A1BG | A1BG, GRB2, CRISP3, PTPN11, GAB2, AHSG, CRK, SERPINA1, AMBP, A2M, TF |
| A1CF | A1CF | A1CF, APOBEC1, APOB, APOBEC3F, APOBEC3G, SYNCRIP, APOBEC4, APOBEC2, APOBEC3H, APOBEC3A, CDA |
| A2M | A2M | A2M, APOA1, LRP1, HP, KLK4, IL1B, ALB, SERPINA1, APOE, HSPA5, SERPINF2 |
| ... | ... | ... |

| Gene | P-value |
|------|---------|
| A1BG | 0.1644 |
| A1CF | 0.9786 |
| A2M | 0.8674 |
| ... | ... |

Reference panel

Phenotype

| GeneSet | Number of genes | P-value | Core Subset |
|---------|-----------------|----------|----------------|
| A1BG | 11 | 0.0731 | GRB2, A2M |
| A1CF | 11 | 0.819 | APOBEC3H, A1CF |
| A2M | 11 | 1.57e-06 | A2M, ALB, APOE |
| ... | ... | ... | ... |

RareNet

D

Result

| Gene | P-value |
|------|----------|
| A1BG | 0.1644 |
| A1CF | 0.9765 |
| A2M | 1.57e-06 |
| ... | ... |