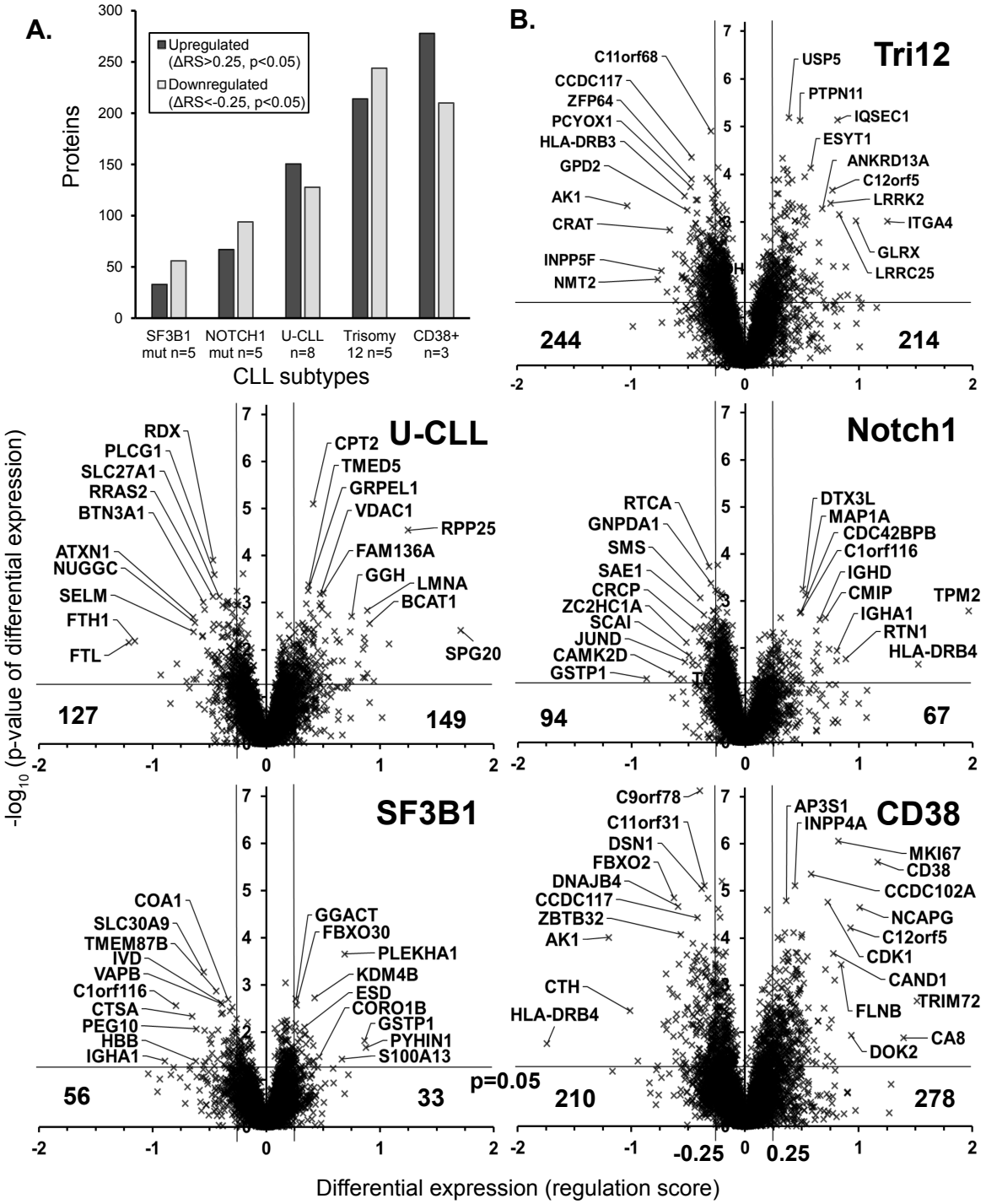
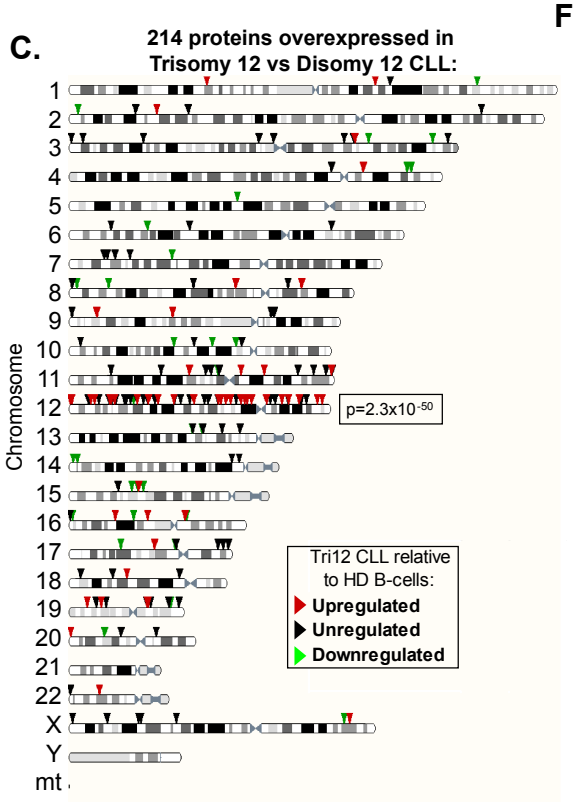
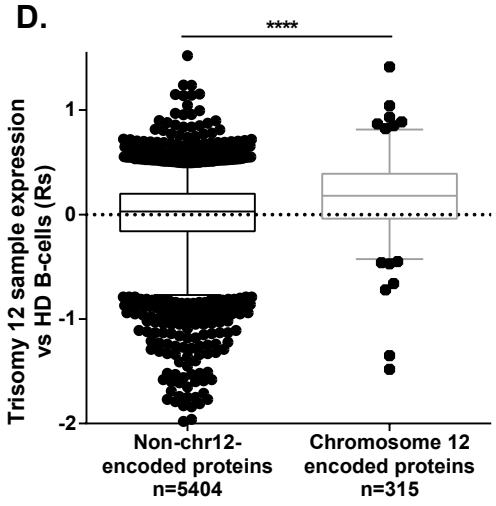
Figure S3. Analysis of emerging subtype-specific expression patterns across CLL. **A.** Summary of subtype-specific protein expression determined by differential regulation score (ΔRs = Rs subtype A – Rs subtype B). **B.** Volcano plots highlighting examples of the most upregulated and downregulated proteins in each subtype. Statistical testing was applied as a means of highlighting an approximate signature. **C.** Chromosome enrichment analysis of the 214 trisomy 12-overexpressed proteins, additionally highlighting the expression of those proteins relative to B-cell controls. **D.** Chr12-encoded protein expression in trisomy 12 samples relative to HDB, compared to that of non-chr12 proteins. **E.** IPA upstream regulator analysis of the proteins regulated in trisomy 12 versus disomy 12 CLL. **F.** literature-derived associations between trisomy 12-upregulated chromosome 12 proteins and p53, highlighting the expression in individual samples. **G.** The location of each protein's gene on chromosome 12, of those described in F. **H.** Pathway describing those 10 proteins (from F.) suggested to interfere with effective p53 function.



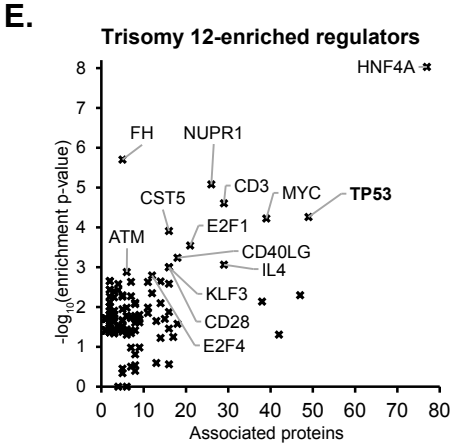
C.



D.



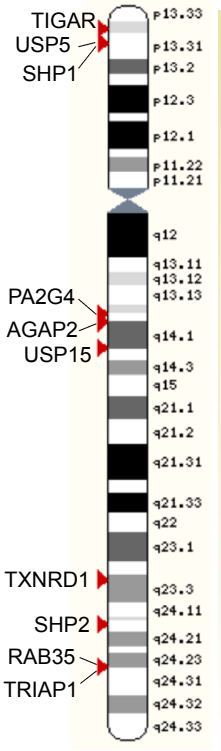
E.



F. Trisomy 12-overexpressed chr12-encoded p53-associated proteins

Protein	Evidence (Unique peptides, PSMs)	Log_2 (ratios to HDB) 1 / 0 / -1 — Disomy 12 — Trisomy 12	Tri12 ΔRs p-value	Effects on p53
Ubiquitin carboxyl-terminal hydrolase 5 (**USP5**)	26, 312		**0.39** 6.4E-6	Negatively regulates p53
Tyr phosphatase non-receptor type 11 (**SHP2/PTPN11**)	26, 197		**0.48** 7.4E-6	Signalling inhibits p53-induced senescence
Ubiquitin carboxyl-terminal hydrolase 15 (**USP15**)	26, 199		**0.33** 4.6E-5	Stabilises MDM2 expression
TP53-regulated inhibitor of apoptosis 1 (**TRIAP1/p53CSV**)	3, 31		**0.53** 1.1E-4	Repressor of p21
Arf-GAP with GTPase, ANK/PH 2 (**AGAP2/PIKE-A**)	8, 51		**0.42** 1.3E-4	Knock-down stablised p53, acts via AKT/MDM2
Proliferation-associated protein 2G4 (**PA2G4/EBP1**)	16, 421		**0.25** 1.3E-4	Enhances MDM2-p53 association
Thioredoxin reductase 1 (**TXNRD1**)	18, 141		**0.38** 1.5E-4	Inhibition increased p53-DNA binding
TP53-induced glycolysis + apoptosis regulator (**TIGAR**)	6, 45		**0.77** 2.1E-4	Inversely correlates with p53 expression
RAS oncogene family member Rab-35 (**RAB35/1c**)	7, 216		**0.44** 9.3E-4	Supresses PRPK-induced p53 activation
Tyr phosphatase non-receptor type 6 (**SHP1/PTPN6**)	41, 1521		**0.46** 7.3E-3	Overexpression reduced p53 phosphorylation

G.



H. Tri12/Chr12 inhibitors of p53 activity