Supporting data S2.

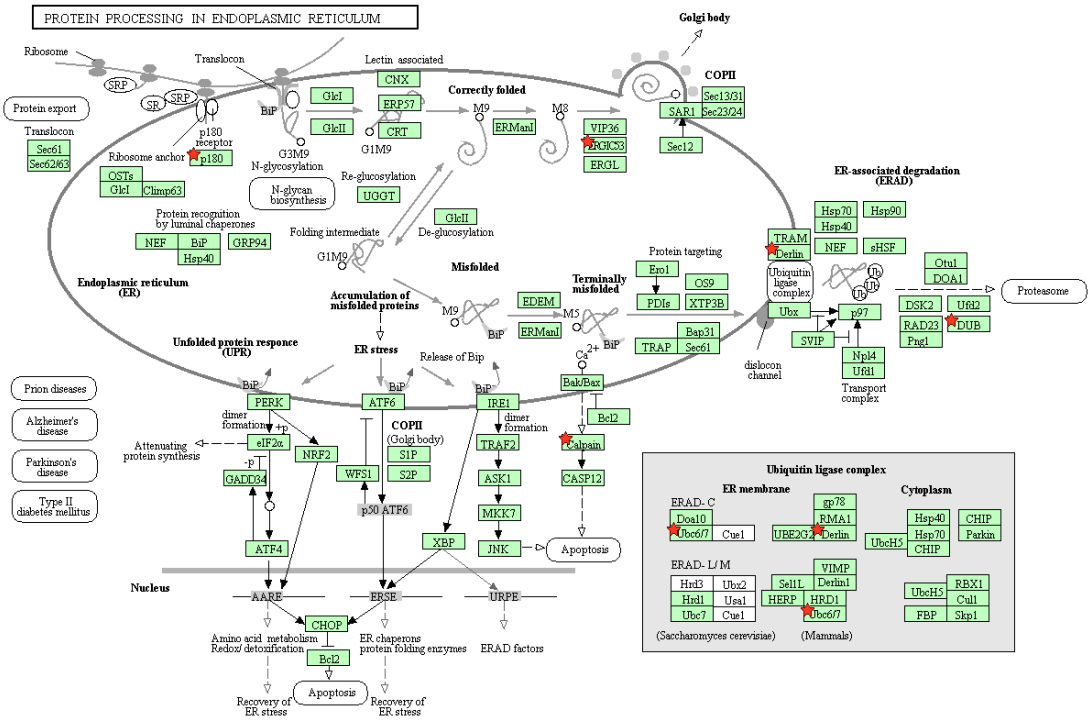
Gene ontology terms mutation identified

GO term	Count
proteolysis	10
immune response	9
post-translational protein modification	9
regulation of transcription from RNA polymerase II promoter	8
protein N-linked glycosylation via asparagine	7
ER to Golgi vesicle-mediated transport	6
chromatin organization	6
protein ubiquitination involved in ubiquitin-dependent protein catabolic process	5
G2/M transition of mitotic cell cycle	5
intrinsic apoptotic signaling pathway	4
microtubule cytoskeleton organization	4
protein processing	4
vesicle-mediated transport	4
proteasome-mediated ubiquitin-dependent protein catabolic process	4
DNA replication, recombination, and repair	4
negative regulation of DNA binding	3
proteolysis involved in cellular protein catabolic process	3
negative regulation of phosphatase activity	3
histamine biosynthetic process	2
regulation of cell-substrate adhesion	2
nuclear membrane organization	2
positive regulation of pri-miRNA transcription from RNA polymerase II promoter	2
DNA topological change	2
negative regulation of retrograde protein transport, ER to cytosol	2

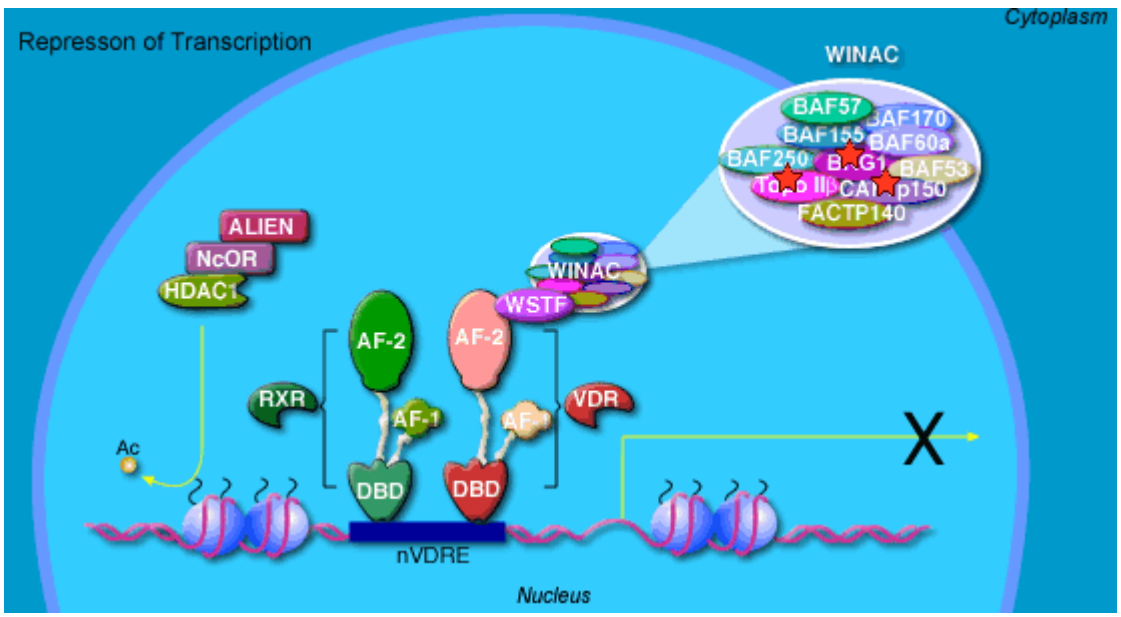
Supporting data S3.

Pathway analysis results muation identified

Protein processing in endoplasmic reticulum



Control of Gene Expression by Vitamin D Receptor



Supporting data S4.

Gene ontology terms expression silenced

GO term	Count
small molecule metabolic process	32
gene expression	22
apoptotic process	18
innate immune response	18
mitotic cell cycle	17
translation	14
viral process	14
cellular nitrogen compound metabolic process	12
negative regulation of apoptotic process	12
response to drug	11
RNA splicing	10
neurotrophin TRK receptor signaling pathway	10
multicellular organismal development	10
cell division	9
DNA repair	9
SRP-dependent cotranslational protein targeting to membrane	8
mRNA processing	8
regulation of cell proliferation	8
organelle organization	8
translational initiation	7
viral life cycle	7
mitotic nuclear division	7
translational termination	6
selenocysteine metabolic process	6
translational elongation	6
peptidyl-tyrosine dephosphorylation	6
viral transcription	6
selenium compound metabolic process	6
nuclear-transcribed mRNA catabolic process, nonsense-mediated decay	6
G2/M transition of mitotic cell cycle	6
tumor necrosis factor-mediated signaling pathway	6
G1/S transition of mitotic cell cycle	6
DNA strand elongation involved in DNA replication	5
response to toxic substance	5
antigen processing and presentation of peptide antigen via MHC class I	5
apoptotic signaling pathway	5
regulation of cell shape	5
positive regulation of NF-kappaB transcription factor activity	5
telomere maintenance via semi-conservative replication	4
telomere maintenance via recombination	4
telomere maintenance	4
T cell costimulation	4
response to nutrient	4
anaphase-promoting complex-dependent proteasomal ubiquitin-dependent protein catabolic process	4
establishment or maintenance of transmembrane electrochemical gradient	3
regulation of reactive oxygen species metabolic process	3
spindle assembly	3
inactivation of MAPK activity	3
DNA replication initiation	3
DNA damage response, detection of DNA damage	3
nucleotide-excision repair, DNA incision	3
regulation of cyclin-dependent protein serine/threonine kinase activity	3
positive regulation of actin filament polymerization	3
negative regulation of glucose import in response to insulin stimulus	2
T cell antigen processing and presentation	2
DNA replication, synthesis of RNA primer	2
regulation of transcription from RNA polymerase I promoter	2
positive regulation by host of viral genome replication	2
negative regulation of systemic arterial blood pressure	2
ribosome assembly	2
negative regulation of protein kinase activity by regulation of protein phosphorylation	2
activation of cysteine-type endopeptidase activity involved in apoptotic process by cytochrome c	2

Supporting data S5.

Pathway analysis results expression silenced

Pathway	Count
DNA replication	5
Viral carcinogenesis	8
Ribosome	8
Epstein-Barr virus infection	7
DNA replication	5
TNF signaling pathway	5
NF-kappa B signaling pathway	5
Glycolysis / Gluconeogenesis	4
Carbohydrate digestion and absorption	4
Proximal tubule bicarbonate reclamation	3