Appendix 3. Mutant data - *Tyrp1* correlates in enriched biological process categories.

Gene symbol	**Gene name**	**Biological process categories**
Abca1	ATP-binding cassette	• protein metabolic process
Capn6	Calpain 6	• protein metabolic process
Csnk2a1	Casein kinase 2	• protein metabolic process
Cul2	Cullin 2	• protein metabolic process
Dcn	Decorin	• glycoprotein metabolic process • protein metabolic process
Dct	Dopachrome tautomerase	• melanin biosynthetic process from tyrosine • melanin metabolic process • pigmentation
Dock7	Dedicator of cytokinesis 7	• pigmentation
Dync2h1	Dynein cytoplasmic 2 heavy chain 1	• protein metabolic process
Ednrb	Endothelin receptor type B	• mesenchymal cell development • mesenchyme development • neural crest cell development • neural crest cell differentiation • neural crest cell migration • pigmentation
Eef2k	Eukaryotic elongation factor-2 kinase	• protein metabolic process
Efnb1	Ephrin B1	• mesenchymal cell development • mesenchyme development • neural crest cell development • neural crest cell differentiation • neural crest cell migration
Fap	Fibroblast activation protein	• protein metabolic process
Fkbp7	FK506 binding protein 7	• protein metabolic process
Fkbp9	FK506 binding protein 9	• protein metabolic process
Hs2st1	Heparan sulfate 2-O-sulfotransferase 1	• glycoprotein metabolic process
Igf1	Insulin-like growth factor 1	• glycoprotein metabolic process • protein metabolic process

Impad1	Inositol monophosphatase domain containing 1	• glycoprotein metabolic process
Kitl	Kit ligand	• mesenchymal cell development • mesenchyme development • neural crest cell development • neural crest cell differentiation • neural crest cell migration • pigmentation • protein metabolic process
Klhl13	Kelch-like 13	• protein metabolic process
Ksr1	Kinase suppressor of ras 1	• protein metabolic process
Large	Like-glycosyltransferase	• glycoprotein metabolic process
Malt1	Mucosa associated lymphoid tissue lymphoma translocation gene 1	• protein metabolic process
March3	Membrane-associated ring finger	• protein metabolic process
Mark1	MAP/microtubule affinity-regulating kinase 1	• protein metabolic process
Met	Met proto-oncogene	• protein metabolic process
Mmp24	Matrix metallopeptidase 24	• protein metabolic process
Mysm1	Myb-like SWIRM and MPN domains 1	• protein metabolic process
Nanos1	Nanos homolog 1	• protein metabolic process
Npepps	Aminopeptidase puromycin sensitive	• protein metabolic process
Nrip3	Nuclear receptor interacting protein 3	• protein metabolic process
Ntrk2	Neurotrophic tyrosine kinase	• protein metabolic process
Ogt	O-linked N-acetylglucosamine (GlcNAc) transferase	• glycoprotein metabolic process • protein metabolic process
Oma1	OMA1 homolog	• protein metabolic process
Pan3	PAN3 polyA specific ribonuclease subunit homolog	• protein metabolic process
Pdp1	Pyruvate dehyrogenase phosphatase catalytic subunit 1	• protein metabolic process
Ppp1r12a	Protein phosphatase 1	• protein metabolic process

Prkcq	Protein kinase C	• protein metabolic process
Prpf4b	PRP4 pre-mRNA processing factor 4 homolog B	• protein metabolic process
Ptpn1	Protein tyrosine phosphatase	• protein metabolic process
Ptprk	Protein tyrosine phosphatase	• protein metabolic process
Rapgef4	Rap guanine nucleotide exchange factor 4	• protein metabolic process
Rdh10	Retinol dehydrogenase 10	• mesenchymal cell development • mesenchyme development • neural crest cell development • neural crest cell differentiation
Rgr	Retinal G protein coupled receptor	• protein metabolic process
Rnf19a	Ring finger protein 19A	• protein metabolic process
Robld3	Roadblock domain containing 3	• protein metabolic process
Rrh	Retinal pigment epithelium derived rhodopsin homolog	• protein metabolic process
Sema3c	Sema domain	• mesenchymal cell development • mesenchyme development • neural crest cell development • neural crest cell differentiation • neural crest cell migration
Sep15	Selenoprotein	• protein metabolic process
Skp2	S-phase kinase-associated protein 2	• protein metabolic process
Slc4a10	Solute carrier family 4	• glycoprotein metabolic process • protein metabolic process
Sod1	Superoxide dismutase 1	• protein metabolic process
Spcs1	Signal peptidase complex subunit 1 homolog	• protein metabolic process
St3gal6	ST3 beta-galactoside alpha-2,3-sialyltransferase 6	• glycoprotein metabolic process • protein metabolic process
Tlk2	Tousled-like kinase 2	• protein metabolic process

Trim37	Tripartite motif-containing 37	• protein metabolic process
Tyr	Tyrosinase	• melanin metabolic process • pigmentation
Tyrp1	Tyrosinase-related protein 1	• melanin biosynthetic process from tyrosine • melanin metabolic process • pigmentation
Ube2d3	Ubiquitin-conjugating enzyme E2D 3	• protein metabolic process
Ubr1	Ubiquitin protein ligase E3 component n-recognin 1	• protein metabolic process
Ubr3	Ubiquitin protein ligase E3 component n-recognin 3	• protein metabolic process
Ulk2	Unc-51 like kinase 2	• protein metabolic process
Usp9x	Ubiquitin specific peptidase 9	• protein metabolic process
Usp14	Ubiquitin specific peptidase 14	• protein metabolic process
Vps35	Vacuolar protein sorting 35	• protein metabolic process