

**Supplementary information, Table S14** Functional enrichment categories of PSGs reported by Rubin and colleagues in all domestic lines(AD). Categories associated with vision-related function are marked in green.

Term	Term ID	P-value	Gene number	Descriptions
ke	KEGG:04621	2.59E-02	3	NOD-like receptor signaling pathway
ke	KEGG:00770	5.00E-02	2	Pantothenate and CoA biosynthesis
hp	HP:0410008	7.77E-03	4	Abnormality of the peripheral nervous system
hp	HP:0200013	3.59E-03	2	Neoplasm of fatty tissue
hp	HP:0200007	4.35E-02	2	Abnormal size of the palpebral fissures
hp	HP:0100886	3.77E-02	7	Abnormality of globe location
hp	HP:0100851	4.28E-02	4	Abnormal emotion/affect behavior
hp	HP:0100790	1.22E-02	6	Hernia
hp	HP:0100755	1.88E-03	3	Abnormality of salivation
hp	HP:0100729	4.35E-02	2	Large face
hp	HP:0100691	2.26E-02	2	Abnormality of the curvature of the cornea
hp	HP:0100689	3.41E-02	2	Decreased corneal thickness
hp	HP:0100659	4.46E-02	2	Abnormality of the cerebral vasculature
hp	HP:0100615	1.43E-02	2	Ovarian neoplasm
hp	HP:0100589	7.64E-03	3	Urogenital fistula
hp	HP:0100547	1.36E-02	16	Abnormality of forebrain morphology
hp	HP:0100543	3.66E-02	13	Cognitive impairment
hp	HP:0100540	2.65E-03	2	Palpebral edema
hp	HP:0100539	4.29E-03	2	Periorbital edema
hp	HP:0100335	7.49E-03	2	Non-midline cleft lip
hp	HP:0100259	3.63E-02	2	Postaxial polydactyly
hp	HP:0100022	1.87E-02	14	Abnormality of movement
hp	HP:0040195	2.92E-02	9	Decreased head circumference
hp	HP:0040075	2.37E-02	2	Hypopituitarism
hp	HP:0030311	3.63E-02	2	Lower extremity joint dislocation
hp	HP:0030182	3.59E-03	2	Tetraplegia/tetraparesis
hp	HP:0012874	2.49E-02	2	Abnormal male reproductive system physiology
hp	HP:0012823	3.13E-02	14	Clinical modifier
hp	HP:0012758	3.81E-02	12	Neurodevelopmental delay
hp	HP:0012640	6.63E-03	2	Abnormality of intracranial pressure
hp	HP:0012639	4.18E-02	22	Abnormality of nervous system morphology
hp	HP:0012575	4.24E-02	2	Abnormality of the nephron
hp	HP:0012547	1.44E-02	11	Abnormal involuntary eye movements
hp	HP:0012531	2.24E-02	3	Pain
hp	HP:0012503	1.76E-02	3	Abnormality of the pituitary gland
hp	HP:0012443	1.47E-02	21	Abnormality of brain morphology
hp	HP:0012387	6.63E-03	2	Bronchitis

hp	HP:0012331	1.09E-02	3	Abnormal autonomic nervous system morphology
hp	HP:0012210	4.76E-02	7	Abnormal renal morphology
hp	HP:0012130	4.81E-02	5	Abnormality of cells of the erythroid lineage
hp	HP:0012103	1.98E-02	2	Abnormality of the mitochondrion
hp	HP:0012031	3.59E-03	2	Lipomatous tumor
hp	HP:0011815	9.07E-03	3	Cephalocele
hp	HP:0011804	4.76E-02	18	Abnormality of muscle physiology
hp	HP:0011799	1.59E-02	4	Abnormality of facial soft tissue
hp	HP:0011772	1.98E-02	2	Abnormality of thyroid morphology
hp	HP:0011747	1.65E-02	3	Abnormality of the anterior pituitary
hp	HP:0011733	2.72E-02	2	Abnormality of adrenal physiology
hp	HP:0011732	9.31E-03	2	Abnormality of adrenal morphology
hp	HP:0011486	3.52E-02	2	Abnormality of corneal thickness
hp	HP:0011458	5.00E-02	9	Abdominal symptom
hp	HP:0011446	1.29E-02	20	Abnormality of higher mental function
hp	HP:0011443	1.06E-02	10	Abnormality of coordination
hp	HP:0011442	2.19E-02	16	Abnormality of central motor function
hp	HP:0011355	4.83E-02	6	Localized skin lesion
hp	HP:0011338	3.69E-02	2	Abnormality of mouth shape
hp	HP:0011334	9.35E-04	2	Facial shape deformation
hp	HP:0011329	3.37E-02	3	Abnormality of cranial sutures
hp	HP:0011328	1.06E-02	3	Abnormality of fontanelles
hp	HP:0011283	2.97E-02	10	Abnormality of the metencephalon
hp	HP:0011282	2.97E-02	10	Abnormality of hindbrain morphology
hp	HP:0011025	3.29E-02	9	Abnormality of cardiovascular system physiology
hp	HP:0011017	4.03E-02	4	Abnormality of cell physiology
hp	HP:0011014	4.49E-02	5	Abnormal glucose homeostasis
hp	HP:0010950	2.78E-02	2	Abnormality of the fourth ventricle
hp	HP:0010866	7.61E-03	6	Abdominal wall defect
hp	HP:0010864	1.87E-02	2	Intellectual disability, severe
hp	HP:0010787	2.78E-02	2	Genital neoplasm
hp	HP:0010785	1.98E-02	2	Gonadal neoplasm
hp	HP:0010647	4.24E-02	2	Abnormal elasticity of skin
hp	HP:0010576	1.19E-02	3	Intracranial cystic lesion
hp	HP:0010460	2.78E-02	7	Abnormality of the female genitalia
hp	HP:0010161	1.81E-02	2	Abnormality of the phalanges of the toes
hp	HP:0009774	3.52E-02	2	Triangular shaped phalanges of the hand
hp	HP:0009602	3.24E-02	2	Abnormality of thumb phalanx
hp	HP:0009136	2.95E-02	2	Duplication involving bones of the feet
hp	HP:0009124	1.80E-02	3	Abnormality of adipose tissue
hp	HP:0009121	1.98E-02	21	Abnormal axial skeleton morphology
hp	HP:0009118	4.19E-02	6	Aplasia/Hypoplasia of the mandible
hp	HP:0009116	4.34E-02	6	Aplasia/Hypoplasia involving bones of the skull

hp	HP:0008872	4.46E-02	4	Feeding difficulties in infancy
hp	HP:0008678	3.20E-02	3	Renal hypoplasia/aplasia
hp	HP:0008572	2.26E-02	2	External ear malformation
hp	HP:0008316	3.26E-03	2	Abnormal mitochondria in muscle tissue
hp	HP:0008067	2.37E-02	2	Abnormally lax or hyperextensible skin
hp	HP:0008056	3.35E-02	4	Aplasia/Hypoplasia affecting the eye
hp	HP:0008047	2.36E-02	3	Abnormality of the vasculature of the eye
hp	HP:0008046	2.04E-02	3	Abnormality of the retinal vasculature
hp	HP:0007379	4.19E-02	2	Neoplasm of the genitourinary tract
hp	HP:0007364	1.67E-02	12	Aplasia/Hypoplasia of the cerebrum
hp	HP:0007360	1.65E-02	5	Aplasia/Hypoplasia of the cerebellum
hp	HP:0007256	4.48E-02	3	Abnormal pyramidal signs
hp	HP:0006817	1.50E-02	3	Aplasia/Hypoplasia of the cerebellar vermis
hp	HP:0006703	3.06E-02	2	Aplasia/Hypoplasia of the lungs
hp	HP:0005750	2.37E-02	2	Contractures of the joints of the lower limbs
hp	HP:0005607	6.91E-03	5	Abnormality of the tracheobronchial system
hp	HP:0005445	2.55E-02	2	Widened posterior fossa
hp	HP:0005262	4.67E-02	2	Abnormality of the synovia
hp	HP:0005107	2.37E-02	2	Abnormality of the sacrum
hp	HP:0004426	4.62E-02	2	Abnormality of the cheek
hp	HP:0004372	3.05E-03	6	Reduced consciousness/confusion
hp	HP:0004362	1.09E-02	3	Abnormality of the enteric ganglia
hp	HP:0004360	2.13E-02	5	Abnormality of acid-base homeostasis
hp	HP:0004329	4.61E-02	10	Abnormality of the posterior segment of the eye
hp	HP:0004325	2.68E-02	9	Decreased body weight
hp	HP:0004323	3.54E-02	11	Abnormality of body weight
hp	HP:0004305	1.60E-02	5	Involuntary movements
hp	HP:0004302	2.52E-02	3	Functional motor problems
hp	HP:0004299	7.32E-03	6	Hernia of the abdominal wall
hp	HP:0004298	5.93E-03	7	Abnormality of the abdominal wall
hp	HP:0003812	1.51E-02	7	Phenotypic variability
hp	HP:0003808	2.35E-02	16	Abnormal muscle tone
hp	HP:0003781	5.20E-04	3	Excessive salivation
hp	HP:0003677	3.91E-02	2	Slow progression
hp	HP:0003593	1.59E-03	8	Infantile onset
hp	HP:0003549	3.94E-02	12	Abnormality of connective tissue
hp	HP:0003546	1.87E-02	2	Exercise intolerance
hp	HP:0003487	2.90E-02	3	Babinski sign
hp	HP:0003457	4.78E-02	2	EMG abnormality
hp	HP:0003287	1.87E-02	2	Abnormality of mitochondrial metabolism
hp	HP:0003128	5.83E-03	4	Lactic acidosis
hp	HP:0003119	4.57E-02	2	Abnormality of lipid metabolism
hp	HP:0003117	3.59E-02	3	Abnormality of circulating hormone level

hp	HP:0003011	4.22E-02	21	Abnormality of the musculature
hp	HP:0002977	1.12E-02	15	Aplasia/Hypoplasia involving the central nervous system
hp	HP:0002921	4.88E-02	4	Abnormality of the cerebrospinal fluid
hp	HP:0002837	2.36E-03	2	Recurrent bronchitis
hp	HP:0002827	2.83E-02	2	Hip dislocation
hp	HP:0002804	2.20E-02	2	Arthrogryposis multiplex congenita
hp	HP:0002803	2.66E-02	2	Congenital contracture
hp	HP:0002795	3.62E-02	8	Functional respiratory abnormality
hp	HP:0002793	4.18E-02	3	Abnormal pattern of respiration
hp	HP:0002788	2.37E-02	2	Recurrent upper respiratory tract infections
hp	HP:0002778	1.22E-02	3	Abnormality of the trachea
hp	HP:0002693	3.29E-02	2	Abnormality of the skull base
hp	HP:0002683	4.84E-02	7	Abnormality of the calvaria
hp	HP:0002634	2.09E-02	2	Arteriosclerosis
hp	HP:0002621	1.98E-02	2	Atherosclerosis
hp	HP:0002575	1.70E-02	2	Tracheoesophageal fistula
hp	HP:0002553	2.60E-02	2	Highly arched eyebrow
hp	HP:0002539	2.08E-03	2	Cortical dysplasia
hp	HP:0002538	4.93E-02	2	Abnormality of the cerebral cortex
hp	HP:0002516	6.63E-03	2	Increased intracranial pressure
hp	HP:0002510	1.28E-02	2	Spastic tetraplegia
hp	HP:0002493	1.30E-02	13	Upper motor neuron dysfunction
hp	HP:0002465	4.29E-03	2	Poor speech
hp	HP:0002445	1.82E-03	2	Tetraplegia
hp	HP:0002438	2.57E-02	3	Cerebellar malformation
hp	HP:0002360	2.16E-02	3	Sleep disturbance
hp	HP:0002354	1.76E-02	2	Memory impairment
hp	HP:0002350	8.48E-03	3	Cerebellar cyst
hp	HP:0002344	3.59E-03	2	Progressive neurologic deterioration
hp	HP:0002334	1.72E-02	3	Abnormality of the cerebellar vermis
hp	HP:0002315	3.91E-02	2	Headache
hp	HP:0002311	3.96E-02	4	Incoordination
hp	HP:0002307	3.94E-03	2	Drooling
hp	HP:0002270	7.57E-03	4	Abnormality of the autonomic nervous system
hp	HP:0002251	1.09E-02	3	Aganglionic megacolon
hp	HP:0002244	3.69E-02	2	Abnormality of the small intestine
hp	HP:0002198	2.78E-02	2	Dilated fourth ventricle
hp	HP:0002194	2.95E-03	2	Delayed gross motor development
hp	HP:0002186	7.91E-03	3	Apraxia
hp	HP:0002119	4.07E-02	4	Ventriculomegaly
hp	HP:0002109	2.55E-02	2	Abnormality of the bronchi
hp	HP:0002104	2.32E-02	3	Apnea

hp	HP:0002089	1.87E-02	2	Pulmonary hypoplasia
hp	HP:0002087	7.61E-03	6	Abnormality of the upper respiratory tract
hp	HP:0002084	9.07E-03	3	Encephalocele
hp	HP:0002072	8.19E-03	3	Chorea
hp	HP:0002071	4.14E-02	2	Abnormality of extrapyramidal motor function
hp	HP:0002060	1.32E-02	16	Abnormality of the cerebrum
hp	HP:0002031	2.53E-02	5	Abnormality of the esophagus
hp	HP:0002027	1.29E-02	3	Abdominal pain
hp	HP:0002017	9.57E-03	5	Nausea and vomiting
hp	HP:0002013	1.61E-02	3	Vomiting
hp	HP:0002011	2.92E-02	21	Morphological abnormality of the central nervous system
hp	HP:0002009	9.35E-04	2	Potter facies
hp	HP:0001999	2.96E-02	8	Abnormal facial shape
hp	HP:0001943	4.57E-02	2	Hypoglycemia
hp	HP:0001941	1.73E-02	5	Acidosis
hp	HP:0001939	4.05E-02	20	Abnormality of metabolism/homeostasis
hp	HP:0001877	4.81E-02	5	Abnormality of erythrocytes
hp	HP:0001829	2.89E-02	2	Foot polydactyly
hp	HP:0001824	1.69E-02	3	Weight loss
hp	HP:0001770	4.46E-02	2	Toe syndactyly
hp	HP:0001763	3.91E-02	2	Pes planus
hp	HP:0001739	3.01E-02	2	Abnormality of the nasopharynx
hp	HP:0001710	2.60E-02	2	Conotruncal defect
hp	HP:0001695	3.75E-02	2	Cardiac arrest
hp	HP:0001649	7.36E-03	3	Tachycardia
hp	HP:0001645	3.58E-02	2	Sudden cardiac death
hp	HP:0001636	2.55E-02	2	Tetralogy of Fallot
hp	HP:0001626	3.63E-02	19	Abnormality of the cardiovascular system
hp	HP:0001622	9.07E-03	3	Premature birth
hp	HP:0001600	3.47E-02	2	Abnormality of the larynx
hp	HP:0001562	7.36E-03	3	Oligohydramnios
hp	HP:0001561	3.86E-02	2	Polyhydramnios
hp	HP:0001560	1.73E-02	4	Abnormality of the amniotic fluid
hp	HP:0001551	4.23E-03	5	Abnormality of the umbilicus
hp	HP:0001537	3.88E-03	5	Umbilical hernia
hp	HP:0001518	2.37E-02	2	Small for gestational age
hp	HP:0001438	4.93E-02	19	Abnormality of the abdomen
hp	HP:0001384	4.57E-02	2	Abnormality of the hip joint
hp	HP:0001347	6.72E-03	9	Hyperreflexia
hp	HP:0001337	1.67E-02	5	Tremor
hp	HP:0001336	3.12E-02	2	Myoclonus
hp	HP:0001332	1.98E-03	6	Dystonia

hp	HP:0001320	1.29E-02	3	Cerebellar vermis hypoplasia
hp	HP:0001319	2.72E-02	2	Neonatal hypotonia
hp	HP:0001317	2.95E-02	10	Abnormality of the cerebellum
hp	HP:0001305	2.49E-02	2	Dandy-Walker malformation
hp	HP:0001276	2.37E-02	8	Hypertonia
hp	HP:0001274	1.47E-02	3	Agenesis of corpus callosum
hp	HP:0001270	9.18E-03	5	Motor delay
hp	HP:0001266	8.39E-03	2	Choreoathetosis
hp	HP:0001257	4.40E-02	5	Spasticity
hp	HP:0001254	3.06E-02	2	Lethargy
hp	HP:0001252	2.86E-02	13	Muscular hypotonia
hp	HP:0001251	1.94E-02	7	Ataxia
hp	HP:0001250	6.64E-03	17	Seizures
hp	HP:0001199	9.31E-03	2	Triphalangeal thumb
hp	HP:0001197	4.11E-02	5	Abnormality of prenatal development or birth
hp	HP:0001123	3.18E-02	2	Visual field defect
hp	HP:0001120	4.19E-02	2	Abnormality of corneal size
hp	HP:0001098	4.56E-02	10	Abnormality of the fundus
hp	HP:0001053	1.54E-02	3	Hypopigmented skin patches
hp	HP:0001012	3.26E-03	2	Multiple lipomas
hp	HP:0001010	2.82E-02	3	Hypopigmentation of the skin
hp	HP:0001005	2.24E-02	3	Dermatological manifestations of systemic disorders
hp	HP:0000957	2.55E-02	2	Cafe-au-lait spot
hp	HP:0000932	2.95E-02	2	Abnormality of the posterior cranial fossa
hp	HP:0000929	1.12E-02	19	Abnormality of the skull
hp	HP:0000889	2.78E-02	2	Abnormality of the clavicle
hp	HP:0000864	1.69E-03	6	Abnormality of the hypothalamus-pituitary axis
hp	HP:0000853	5.41E-03	2	Goiter
hp	HP:0000834	5.65E-03	4	Abnormality of the adrenal glands
hp	HP:0000830	2.32E-02	2	Anterior hypopituitarism
hp	HP:0000822	8.45E-03	5	Hypertension
hp	HP:0000818	1.58E-02	12	Abnormality of the endocrine system
hp	HP:0000812	2.14E-02	7	Abnormal internal genitalia
hp	HP:0000752	1.88E-02	3	Hyperactivity
hp	HP:0000738	2.89E-02	2	Hallucinations
hp	HP:0000737	1.87E-02	2	Irritability
hp	HP:0000729	4.19E-03	4	Autistic behavior
hp	HP:0000717	2.66E-02	2	Autism
hp	HP:0000708	1.94E-03	15	Behavioral abnormality
hp	HP:0000657	3.29E-03	3	Oculomotor apraxia
hp	HP:0000639	1.41E-02	11	Nystagmus
hp	HP:0000617	6.63E-03	2	Abnormality of ocular smooth pursuit

hp	HP:0000612	1.76E-02	3	Iris coloboma
hp	HP:0000610	4.98E-02	2	Abnormality of the choroid
hp	HP:0000600	3.75E-02	2	Abnormality of the pharynx
hp	HP:0000589	1.28E-02	4	Coloboma
hp	HP:0000582	4.72E-02	2	Upslanted palpebral fissure
hp	HP:0000581	3.24E-02	2	Blepharophimosis
hp	HP:0000568	4.41E-02	2	Microphthalmos
hp	HP:0000553	3.20E-02	5	Abnormality of the uvea
hp	HP:0000551	2.43E-02	2	Abnormality of color vision
hp	HP:0000545	2.44E-02	4	Myopia
hp	HP:0000543	2.49E-02	2	Optic disc pallor
hp	HP:0000539	2.27E-02	5	Abnormality of refraction
hp	HP:0000532	4.57E-02	2	Chorioretinal abnormality
hp	HP:0000525	1.94E-02	5	Abnormality of the iris
hp	HP:0000508	1.63E-02	7	Ptosis
hp	HP:0000505	4.65E-02	7	Visual impairment
hp	HP:0000499	4.19E-02	2	Abnormality of the eyelashes
hp	HP:0000496	3.18E-02	13	Abnormality of eye movement
hp	HP:0000492	4.75E-02	8	Abnormality of the eyelid
hp	HP:0000490	2.55E-02	2	Deeply set eye
hp	HP:0000482	3.75E-02	2	Microcornea
hp	HP:0000479	4.95E-02	7	Abnormality of the retina
hp	HP:0000453	2.03E-02	2	Choanal atresia
hp	HP:0000426	3.97E-02	2	Prominent nasal bridge
hp	HP:0000415	2.32E-02	2	Abnormality of the choanae
hp	HP:0000383	1.65E-02	2	Abnormality of periauricular region
hp	HP:0000368	3.99E-02	4	Low-set, posteriorly rotated ears
hp	HP:0000347	4.16E-02	6	Micrognathia
hp	HP:0000341	2.60E-02	2	Narrow forehead
hp	HP:0000340	3.29E-02	2	Sloping forehead
hp	HP:0000337	2.03E-02	2	Broad forehead
hp	HP:0000322	2.37E-02	2	Short philtrum
hp	HP:0000316	1.53E-02	7	Hypertelorism
hp	HP:0000315	3.89E-02	8	Abnormality of the orbital region
hp	HP:0000308	1.58E-03	2	Microretrognathia
hp	HP:0000286	1.80E-02	5	Epicanthus
hp	HP:0000282	4.29E-03	2	Facial edema
hp	HP:0000278	2.43E-02	2	Retrognathia
hp	HP:0000276	3.69E-02	2	Long face
hp	HP:0000268	4.24E-02	2	Dolichocephaly
hp	HP:0000260	7.06E-03	2	Wide anterior fontanel
hp	HP:0000252	2.92E-02	9	Microcephaly
hp	HP:0000240	2.43E-02	12	Abnormality of skull size

hp	HP:0000239	6.83E-03	3	Large fontanelles
hp	HP:0000236	1.38E-02	2	Abnormality of the anterior fontanelle
hp	HP:0000235	1.60E-02	5	Abnormality of the fontanelles or cranial sutures
hp	HP:0000234	3.44E-02	24	Abnormality of the head
hp	HP:0000204	4.98E-02	2	Cleft upper lip
hp	HP:0000194	1.28E-02	2	Open mouth
hp	HP:0000157	1.83E-02	4	Abnormality of the tongue
hp	HP:0000152	3.77E-02	24	Abnormality of head or neck
hp	HP:0000137	4.93E-02	2	Abnormality of the ovary
hp	HP:0000112	2.83E-02	2	Nephropathy
hp	HP:0000091	1.54E-02	2	Abnormality of the renal tubule
hp	HP:0000025	2.15E-02	2	Functional abnormality of male internal genitalia
hp	HP:0000023	8.77E-03	3	Inguinal hernia
hp	HP:0000008	1.77E-02	7	Abnormality of female internal genitalia
hp	HP:0000007	2.77E-02	26	Autosomal recessive inheritance
hp	HP:0000006	5.00E-02	16	Autosomal dominant inheritance
hp	HP:0000005	3.78E-02	38	Mode of inheritance
BP	GO:2001022	3.99E-02	2	positive regulation of response to DNA damage stimulus
BP	GO:2000377	4.21E-02	3	regulation of reactive oxygen species metabolic process
BP	GO:1990778	4.64E-02	4	protein localization to cell periphery
BP	GO:1990542	1.36E-02	2	mitochondrial transmembrane transport
BP	GO:1904591	1.63E-02	3	positive regulation of protein import
BP	GO:1903522	3.20E-02	4	regulation of blood circulation
BP	GO:1901990	4.54E-02	4	regulation of mitotic cell cycle phase transition
MF	GO:1901981	3.87E-02	3	phosphatidylinositol phosphate binding
MF	GO:1901618	4.77E-03	3	organic hydroxy compound transmembrane transporter activity
BP	GO:1900182	2.02E-02	3	positive regulation of protein localization to nucleus
CC	GO:0098798	4.57E-02	3	mitochondrial protein complex
CC	GO:0098794	2.74E-02	5	postsynapse
MF	GO:0098772	2.50E-02	14	molecular function regulator
CC	GO:0098590	2.33E-02	9	plasma membrane region
BP	GO:0097306	1.28E-02	3	cellular response to alcohol
BP	GO:0097305	4.45E-02	3	response to alcohol
BP	GO:0097031	7.12E-03	2	mitochondrial respiratory chain complex I biogenesis
BP	GO:0090659	2.78E-02	2	walking behavior
BP	GO:0090075	9.08E-03	2	relaxation of muscle
BP	GO:0090002	4.93E-02	3	establishment of protein localization to plasma membrane



BP	GO:0072661	4.58E-03	2	protein targeting to plasma membrane
BP	GO:0072659	4.54E-02	4	protein localization to plasma membrane
BP	GO:0072593	4.10E-02	4	reactive oxygen species metabolic process
BP	GO:0071806	4.41E-03	3	protein transmembrane transport
BP	GO:0071805	4.27E-02	4	potassium ion transmembrane transport
BP	GO:0071804	4.27E-02	4	cellular potassium ion transport
BP	GO:0071514	8.07E-03	2	genetic imprinting
BP	GO:0071407	1.63E-02	6	cellular response to organic cyclic compound
BP	GO:0071396	4.76E-02	5	cellular response to lipid
BP	GO:0071383	4.81E-02	3	cellular response to steroid hormone stimulus
BP	GO:0070482	2.83E-02	4	response to oxygen levels
BP	GO:0065002	3.28E-02	2	intracellular protein transmembrane transport
BP	GO:0061647	1.88E-02	2	histone H3-K9 modification
BP	GO:0061384	9.08E-03	2	heart trabecula morphogenesis
BP	GO:0061383	2.47E-02	2	trabecula morphogenesis
BP	GO:0061061	1.89E-02	9	muscle structure development
BP	GO:0060537	4.53E-02	6	muscle tissue development
BP	GO:0060420	1.61E-02	2	regulation of heart growth
BP	GO:0060419	3.74E-03	3	heart growth
BP	GO:0060122	1.88E-02	2	inner ear receptor stereocilium organization
BP	GO:0060119	3.81E-02	2	inner ear receptor cell development
BP	GO:0060113	1.70E-02	3	inner ear receptor cell differentiation
MF	GO:0060089	5.00E-02	16	molecular transducer activity
BP	GO:0060043	1.12E-02	2	regulation of cardiac muscle cell proliferation
BP	GO:0060038	1.88E-02	2	cardiac muscle cell proliferation
BP	GO:0055117	4.93E-02	2	regulation of cardiac muscle contraction
BP	GO:0055114	4.95E-02	12	oxidation-reduction process
BP	GO:0055085	4.29E-02	16	transmembrane transport
BP	GO:0055024	3.11E-02	2	regulation of cardiac muscle tissue development
BP	GO:0055021	1.36E-02	2	regulation of cardiac muscle tissue growth
BP	GO:0055017	2.86E-03	3	cardiac muscle tissue growth
BP	GO:0055013	3.63E-02	2	cardiac muscle cell development
BP	GO:0055008	3.81E-02	2	cardiac muscle tissue morphogenesis
BP	GO:0055006	4.36E-02	2	cardiac cell development
BP	GO:0055001	2.62E-02	4	muscle cell development
MF	GO:0052689	3.76E-02	3	carboxylic ester hydrolase activity
BP	GO:0051937	2.62E-02	2	catecholamine transport
BP	GO:0051649	3.92E-02	24	establishment of localization in cell
BP	GO:0051567	1.01E-02	2	histone H3-K9 methylation
BP	GO:0051482	2.01E-03	2	positive regulation of cytosolic calcium ion concentration involved in phospholipase C-activating G-protein coupled signaling pathway
BP	GO:0051297	3.87E-02	3	centrosome organization

MF	GO:0051213	7.76E-03	3	dioxygenase activity
BP	GO:0051188	3.33E-02	3	cofactor biosynthetic process
MF	GO:0051117	3.99E-02	2	ATPase binding
BP	GO:0051049	4.83E-02	17	regulation of transport
BP	GO:0051046	3.55E-02	8	regulation of secretion
MF	GO:0051015	4.93E-02	3	actin filament binding
BP	GO:0050906	3.22E-02	3	detection of stimulus involved in sensory perception
BP	GO:0050821	2.18E-02	3	protein stabilization
BP	GO:0048771	1.13E-02	4	tissue remodeling
BP	GO:0048738	3.27E-02	4	cardiac muscle tissue development
BP	GO:0048545	3.93E-02	4	response to steroid hormone
BP	GO:0048514	4.93E-02	7	blood vessel morphogenesis
MF	GO:0046914	4.15E-02	18	transition metal ion binding
BP	GO:0046824	2.63E-02	3	positive regulation of nucleocytoplasmic transport
BP	GO:0046785	2.78E-02	2	microtubule polymerization
BP	GO:0045739	1.36E-02	2	positive regulation of DNA repair
CC	GO:0045202	5.65E-03	10	synapse
BP	GO:0044763	2.06E-02	106	single-organism cellular process
BP	GO:0044743	2.62E-02	2	intracellular protein transmembrane import
BP	GO:0044708	9.53E-03	8	single-organism behavior
BP	GO:0044700	1.96E-02	53	single organism signaling
CC	GO:0044463	3.61E-02	9	cell projection part
CC	GO:0044459	3.75E-02	23	plasma membrane part
CC	GO:0044456	1.45E-02	7	synapse part
CC	GO:0044306	2.32E-02	2	neuron projection terminus
CC	GO:0044291	3.81E-02	2	cell-cell contact zone
BP	GO:0044057	1.38E-03	9	regulation of system process
CC	GO:0043679	1.48E-02	2	axon terminus
BP	GO:0043502	3.11E-02	2	regulation of muscle adaptation
BP	GO:0043500	8.77E-03	3	muscle adaptation
BP	GO:0043200	4.74E-02	2	response to amino acid
MF	GO:0043167	4.13E-02	55	ion binding
BP	GO:0043087	3.20E-02	8	regulation of GTPase activity
BP	GO:0042692	3.96E-02	6	muscle cell differentiation
BP	GO:0042594	4.21E-02	3	response to starvation
BP	GO:0042490	2.10E-02	3	mechanoreceptor differentiation
BP	GO:0042472	4.81E-02	3	inner ear morphogenesis
BP	GO:0042391	4.02E-02	6	regulation of membrane potential
BP	GO:0042307	1.56E-02	3	positive regulation of protein import into nucleus
MF	GO:0038023	2.81E-02	13	signaling receptor activity
BP	GO:0036293	2.42E-02	4	response to decreased oxygen levels
BP	GO:0035873	1.52E-03	2	lactate transmembrane transport

CC	GO:0035032	1.09E-03	2	phosphatidylinositol 3-kinase complex, class III
BP	GO:0034770	1.09E-03	2	histone H4-K20 methylation
CC	GO:0033267	1.94E-02	3	axon part
BP	GO:0033108	1.48E-02	2	mitochondrial respiratory chain complex assembly
BP	GO:0032981	7.12E-03	2	mitochondrial respiratory chain complex I assembly
BP	GO:0032924	2.02E-02	2	activin receptor signaling pathway
BP	GO:0031669	4.69E-02	3	cellular response to nutrient levels
BP	GO:0031644	1.74E-02	2	regulation of neurological system process
CC	GO:0031300	2.97E-02	5	intrinsic component of organelle membrane
CC	GO:0031226	1.06E-02	17	intrinsic component of plasma membrane
BP	GO:0031214	3.12E-02	3	biomineral tissue development
BP	GO:0031023	4.81E-02	3	microtubule organizing center organization
BP	GO:0030534	2.42E-02	4	adult behavior
MF	GO:0030507	7.12E-03	2	spectrin binding
BP	GO:0030282	2.45E-02	3	bone mineralization
BP	GO:0030150	3.17E-03	2	protein import into mitochondrial matrix
BP	GO:0023052	1.39E-02	54	signaling
MF	GO:0022884	2.01E-03	2	macromolecule transmembrane transporter activity
BP	GO:0021591	1.74E-02	2	ventricular system development
MF	GO:0019842	4.93E-02	2	vitamin binding
BP	GO:0019722	3.33E-02	3	calcium-mediated signaling
BP	GO:0018345	1.61E-02	2	protein palmitoylation
BP	GO:0018231	8.07E-03	2	peptidyl-S-diacylglycerol-L-cysteine biosynthetic process from peptidyl-cysteine
BP	GO:0018230	8.07E-03	2	peptidyl-L-cysteine S-palmitoylation
BP	GO:0018198	2.17E-02	2	peptidyl-cysteine modification
BP	GO:0017038	4.45E-02	5	protein import
MF	GO:0016747	4.18E-02	4	transferase activity, transferring acyl groups other than amino-acyl groups
MF	GO:0016746	2.68E-02	5	transferase activity, transferring acyl groups
MF	GO:0016706	2.62E-02	2	oxidoreductase activity, acting on paired donors, with incorporation or reduction of molecular oxygen, 2-oxoglutarate as one donor, and incorporation of one atom each of oxygen into both donors
MF	GO:0016627	4.54E-02	2	oxidoreductase activity, acting on the CH-CH group of donors
MF	GO:0016500	3.85E-03	2	protein-hormone receptor activity
MF	GO:0016417	2.02E-02	2	S-acyltransferase activity
MF	GO:0016248	1.48E-02	2	channel inhibitor activity
MF	GO:0016247	5.50E-03	4	channel regulator activity
BP	GO:0015850	1.27E-02	5	organic hydroxy compound transport

BP	GO:0015844	4.17E-02	2	monoamine transport
BP	GO:0015727	1.52E-03	2	lactate transport
BP	GO:0015672	4.21E-02	8	monovalent inorganic cation transport
MF	GO:0015450	7.34E-04	2	P-P-bond-hydrolysis-driven protein transmembrane transporter activity
MF	GO:0015129	1.52E-03	2	lactate transmembrane transporter activity
BP	GO:0014898	2.56E-03	2	cardiac muscle hypertrophy in response to stress
BP	GO:0014897	3.14E-03	3	striated muscle hypertrophy
BP	GO:0014896	3.14E-03	3	muscle hypertrophy
BP	GO:0014888	1.61E-02	2	striated muscle adaptation
BP	GO:0014887	2.56E-03	2	cardiac muscle adaptation
BP	GO:0014855	3.99E-02	2	striated muscle cell proliferation
BP	GO:0014743	1.36E-02	2	regulation of muscle hypertrophy
BP	GO:0014742	3.85E-03	2	positive regulation of muscle hypertrophy
BP	GO:0014706	3.55E-02	6	striated muscle tissue development
CC	GO:0014069	1.26E-02	4	postsynaptic density
BP	GO:0010633	3.45E-02	2	negative regulation of epithelial cell migration
BP	GO:0010613	3.85E-03	2	positive regulation of cardiac muscle hypertrophy
BP	GO:0010611	1.24E-02	2	regulation of cardiac muscle hypertrophy
BP	GO:0010596	1.48E-02	2	negative regulation of endothelial cell migration
BP	GO:0010501	2.95E-02	2	RNA secondary structure unwinding
CC	GO:0010494	1.36E-02	2	cytoplasmic stress granule
BP	GO:0010257	7.12E-03	2	NADH dehydrogenase complex assembly
BP	GO:0009987	3.15E-02	128	cellular process
BP	GO:0009755	9.69E-03	4	hormone-mediated signaling pathway
BP	GO:0009653	3.10E-02	28	anatomical structure morphogenesis
BP	GO:0009628	2.87E-02	11	response to abiotic stimulus
BP	GO:0009267	3.54E-02	3	cellular response to starvation
BP	GO:0009108	2.10E-02	3	coenzyme biosynthetic process
BP	GO:0008344	2.63E-02	3	adult locomotory behavior
MF	GO:0008320	1.09E-03	2	protein transmembrane transporter activity
MF	GO:0008270	1.67E-02	17	zinc ion binding
MF	GO:0008200	1.36E-02	2	ion channel inhibitor activity
MF	GO:0008092	4.03E-02	11	cytoskeletal protein binding
MF	GO:0008083	4.93E-02	3	growth factor activity
MF	GO:0008028	3.63E-02	2	monocarboxylic acid transmembrane transporter activity
BP	GO:0007628	2.78E-02	2	adult walking behavior
BP	GO:0007626	7.73E-03	6	locomotory behavior
BP	GO:0007528	3.28E-02	2	neuromuscular junction development
BP	GO:0007270	1.35E-02	4	neuron-neuron synaptic transmission
BP	GO:0007215	4.74E-02	2	glutamate receptor signaling pathway
BP	GO:0007204	4.81E-02	3	positive regulation of cytosolic calcium ion

				concentration
BP	GO:0007200	1.70E-03	4	phospholipase C-activating G-protein coupled receptor signaling pathway
BP	GO:0007165	2.45E-02	49	signal transduction
BP	GO:0007154	2.77E-02	53	cell communication
BP	GO:0007098	1.94E-02	3	centrosome cycle
BP	GO:0007009	4.16E-02	5	plasma membrane organization
BP	GO:0006914	4.02E-02	6	autophagy
BP	GO:0006893	3.11E-02	2	Golgi to plasma membrane transport
BP	GO:0006886	4.00E-02	12	intracellular protein transport
BP	GO:0006821	3.87E-02	3	chloride transport
BP	GO:0006612	2.54E-02	3	protein targeting to membrane
BP	GO:0006605	6.88E-03	10	protein targeting
BP	GO:0006400	4.36E-02	2	tRNA modification
BP	GO:0006349	3.85E-03	2	regulation of gene expression by genetic imprinting
BP	GO:0006275	2.36E-02	3	regulation of DNA replication
CC	GO:0005942	1.24E-02	2	phosphatidylinositol 3-kinase complex
CC	GO:0005887	1.42E-02	16	integral component of plasma membrane
CC	GO:0005776	4.17E-02	2	autophagosome
MF	GO:0005251	2.17E-02	2	delayed rectifier potassium channel activity
MF	GO:0005057	3.22E-02	3	receptor signaling protein activity
MF	GO:0004930	4.02E-02	8	G-protein coupled receptor activity
MF	GO:0004871	1.86E-02	16	signal transducer activity
MF	GO:0003725	3.99E-02	2	double-stranded RNA binding
BP	GO:0003300	2.60E-03	3	cardiac muscle hypertrophy
BP	GO:0003299	2.56E-03	2	muscle hypertrophy in response to stress
BP	GO:0003230	1.36E-02	2	cardiac atrium development
BP	GO:0003012	1.37E-02	6	muscle system process
BP	GO:0003008	2.18E-02	17	system process
BP	GO:0002066	4.74E-02	2	columnar/cuboidal epithelial cell development
BP	GO:0001881	1.48E-02	2	receptor recycling
BP	GO:0001666	2.42E-02	4	response to hypoxia
CC	GO:0000407	1.88E-02	2	pre-autophagosomal structure
BP	GO:0000186	3.28E-02	2	activation of MAPKK activity