

**Supplementary Table III:** Full list of the GO terms enriched within genes associated to the nearest TAL1 peak in erythroid cells (identified by ChIP-seq) with a p-value < 0.05

GO term	Count	Size	Pvalue
L-amino acid transport	8	10	1.17E-04
microvillus organization and biogenesis	5	5	4.20E-04
microvillus biogenesis	5	5	4.20E-04
amino acid transport	20	47	6.15E-04
neutral amino acid transport	8	14	3.44E-03
heme biosynthetic process	7	12	5.39E-03
regulation of Ras protein signal transduction	42	135	5.97E-03
erythrocyte differentiation	13	31	8.78E-03
regulation of small GTPase mediated signal transduction	53	181	8.97E-03
mitochondrial fusion	3	3	9.43E-03
organelle fusion	3	3	9.43E-03
heme metabolic process	8	16	9.84E-03
iron ion transport	11	25	1.05E-02
Ras protein signal transduction	54	188	1.32E-02
response to cold	5	8	1.32E-02
pigment biosynthetic process	12	29	1.44E-02
membrane lipid biosynthetic process	27	83	1.56E-02
regulation of synaptic plasticity	7	14	1.57E-02
amine transport	21	61	1.67E-02
pigment metabolic process	13	33	1.83E-02
small GTPase mediated signal transduction	100	384	1.98E-02
erythrocyte differentiation#erythrocyte development	4	6	2.07E-02
proline biosynthetic process	4	6	2.07E-02
carboxylic acid transport	22	66	2.24E-02
polyol metabolic process	9	20	2.29E-02
porphyrin biosynthetic process	7	15	2.41E-02
tetrapyrrole biosynthetic process	7	15	2.41E-02
chromatin modification	47	165	2.56E-02
organic acid transport	22	67	2.76E-02
regulation of acute inflammatory response to antigenic stimulus	3	4	3.17E-02
regulation of inflammatory response to antigenic stimulus	3	4	3.17E-02
bone remodeling#ossification#osteoblast differentiation#osteoblast development	3	4	3.17E-02

erythrocyte differentiation#erythrocyte development#erythrocyte maturation	3	4	3.17E-02
regulation of acute inflammatory response	3	4	3.17E-02
negative regulation of erythrocyte differentiation	3	4	3.17E-02
regulation of hypersensitivity	3	4	3.17E-02
negative regulation of actin filament depolymerization	9	22	3.35E-02
neurotransmitter catabolic process	4	7	4.02E-02
organic cation transport	4	7	4.02E-02
regulation of ARF GTPase activity	5	10	4.08E-02
ureteric bud branching	5	10	4.08E-02
regulation of actin filament depolymerization	9	23	4.21E-02
actin filament depolymerization	9	23	4.21E-02
tetrapyrrole metabolic process	8	19	4.26E-02
porphyrin metabolic process	8	19	4.26E-02
glycerol metabolic process	8	19	4.26E-02
transition metal ion transport	19	58	4.41E-02
inositol and derivative phosphorylation	2	2	4.46E-02
carnitine transport	2	2	4.46E-02
pyrimidine nucleoside diphosphate metabolic process	2	2	4.46E-02
acetylcholine catabolic process	2	2	4.46E-02
peristalsis	2	2	4.46E-02
dopamine receptor, adenylate cyclase inhibiting pathway	2	2	4.46E-02
protein destabilization	2	2	4.46E-02
intracellular sequestering of iron ion	2	2	4.46E-02
L-glutamate import	2	2	4.46E-02
synaptic transmission, cholinergic#acetylcholine catabolic process in synaptic cleft	2	2	4.46E-02
amino acid uptake during transmission of nerve impulse	2	2	4.46E-02
neurotransmitter secretion#synaptic vesicle exocytosis#synaptic vesicle targeting	2	2	4.46E-02
platelet activating factor metabolic process	2	2	4.46E-02
L-amino acid import	2	2	4.46E-02
keratan sulfate metabolic process	2	2	4.46E-02
L-cystine transport	2	2	4.46E-02
sphingosine metabolic process	2	2	4.46E-02
interleukin-13 production#interleukin-13 biosynthetic process	2	2	4.46E-02
phasic smooth muscle contraction	2	2	4.46E-02
apical junction assembly	2	2	4.46E-02
mitochondrial ornithine transport	2	2	4.46E-02
interleukin-13 production	2	2	4.46E-02
regulation of chromatin assembly or disassembly	2	2	4.46E-02

circadian sleep/wake cycle	2	2	4.46E-02
progesterone receptor signaling pathway	2	2	4.46E-02
glycine transport	2	2	4.46E-02
platelet activating factor biosynthetic process	2	2	4.46E-02
sulfur amino acid transport	2	2	4.46E-02
amino acid import	2	2	4.46E-02
morphogenesis of an epithelial sheet	2	2	4.46E-02
O-glycan processing	2	2	4.46E-02
glutamate uptake during transmission of nerve impulse	2	2	4.46E-02
ornithine transport	2	2	4.46E-02