

Strain Name: B6129P2-*Hprt1*^{tm3(CAG-EGFP;mEMS2084)}*Ems*

Chimeras were generated using mEMS2077, mEMS2079, mEMS2084*
*Strain has gone germline

Strain Detail

Type: Pleiades Promoter Project MiniPromoter Strain
Mating System: Chimera x Inbred (current breeding system)
 Heterozygote x Inbred (F N1 x M – future)
 Inbred x Hemizygote (F x M N2+ - future)
Species: laboratory mouse
Investigator: Elizabeth M. Simpson, CMMT, UBC
Generation: N2 germline (16-Dec-08)

Appearance

black

Related Genotype: *a/a*

Strain Description

This transgenic mouse strain has an ‘enhanced’ GFP (EGFP) under the control of the CAG synthetic promoter (CAG = CMV enhancer with the chicken β -actin promoter (InvivoGen). Please refer to MiniPromoter design construct file for further information.

Strain Development

pEMS1277 was electroporated into mEMS1218 (B6129F1-*Gt(ROSA)26Sor*^{tm1Sor/+}, *Hprt1*^{b-m3/Y}) embryonic stem cells (ESCs), and positive constructs were microinjected into ICR (CD-1 022 Charles River) and/or B6(Cg)-*Tyr*^{c-2J/J} (JAX Stock#000058). Resulting chimeras were bred to B6(Cg)-*Tyr*^{c-2J/J} females, and germline N1 progeny identified by the presence of the *Tyr*⁺ allele in combination with the *A*^w (agouti, white belly) and *a* (non-agouti/black) coat color alleles. N1 female heterozygous carriers are mated to C57BL/6J (JAX Stock#000664), and N2 hemizygous male progeny are identified by PCR.

Gene & Allele Details

Allele Symbol: *Hprt1*^{tm3(CAG-EGFP;mEMS2084)}*Ems*
Allele Name: *Hprt1* targeted mutation #3, CAG promoter driving EGFP, derived from ESC mEMS2084, Elizabeth M. Simpson
Common Name(s): *Hprt1*, CAG, chicken β -actin
Mutation Made By: Pleiades Promoter Project

Strain of Origin: 129Ola/Hsd (from E14TG2a)
ES Cell Line Name: mEMS1218
ES Cell Line Strain: (B6-*Hprt1*^{b-m3}/J x 129S1/SvImJ-*Gt(ROSA)26*^{tm1Sor})F1
Gene Symbol and Name: mEMS2084, CAG
Chromosome: X
Strain of Origin: derived from B6-*Hprt1*^{b-m3} (E14TG2a)
Site of Expression: Expression is seen throughout the brain
Expressed Gene: GFP, Green Fluorescent Protein, jellyfish
Green Fluorescent Protein (*GFP*), derived from the jellyfish *Aequorea victoria*, is a versatile reporter molecule which has found use in many biological applications. The original molecule has been modified in order to enhance its fluorescence intensity (*EGFP*, enhanced GFP). When utilized in a transgenic construct, tissue expressing sufficient amounts of GFP will fluoresce when exposed to a 488 nm light source.
Promoter: CAG

Control Information

Control:

Wild-type from the colony

Genotyping Protocols

See CAG pEMS1277 genotyping assay

Colony Maintenance

Breeding & Husbandry: Chimera x B6-*Tyr*^{c-2J} (B6-Alb) females generating N1 heterozygous females. N1 heterozygous females are mated to C57BL/6J males generating N2 hemizygous males. N2 Hemizygous males are mated to C57BL/6J females to generate hetero/hemizygous N3 progeny. Expected coat color from breeding: Black.

Animal Health Reports

Upon Request