

## *nju1Tg* /+ (AB) (CZRC Catalog ID: CZ 224)

### Nature of the mutation

The *nju1Tg* allele is a transgenic zebrafish line *Tg(cyp26a1:EYFP)* which harbor eYFP (enhanced yellow fluorescent protein) driven by wild-type *cyp26a1* promoter.

### Genotyping assay

When a transgenic female zebrafish (heterozygous for the transgene) is mated with a male wild-type zebrafish, the nontransgenic embryos are all fluorescent in cytoplasm at one-cell and two-cell stages. The fluorescent signal is distributed evenly in allembryonic cells of embryos at gastrulation stage and even at somite stage, although the signal becomes weak. When a male transgenic fish mates with a wild-type female, the reporter signals are detected from 75% epiboly (8 hpf) embryos at the presumptive neural plate and around the blastoderm margin. The presence of the reporter signal at 90% epiboly is the same as that at 75% epiboly. At 11 hpf (three-somite stage), the transgene signals are mainly at the presumptive brain regions and the tail bud that correspond to the endogenous expression domains of *cyp26a1* in presumptive forebrain, midbrain and tail bud. At 16 hpf (14-somite), the transgene is expressed in tail bud, developing eyes and pharyngeal arches. At 24 hpf, the fluorescent signals are mainly present in retina, cells in olfactory vesicle, anterior dorsal spinal cord, proctodeum and caudal notochord except that nonspecific signals are present in midbrain region. At 30 hpf, the expression pattern of the transgene is mainly in retina, cells in olfactory vesicle, anterior dorsal spinal cord, proctodeum, caudal notochord, and pharyngeal arches

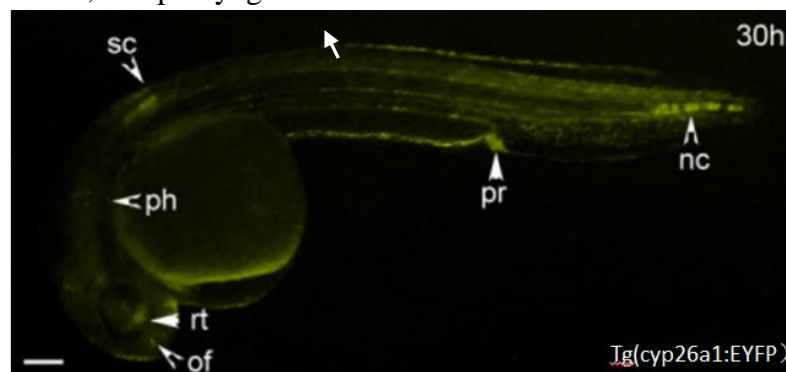


Figure. eYFP expression pattern in *Tg(-1.7apoa2:GFP)* line. The figure shows the expression pattern of the transgene is mainly in retina, cells in olfactory vesicle, anterior dorsal spinal cord, proctodeum, caudal notochord, and pharyngeal arches

### Reference

Hu, P., Tian, M., Bao, J., Xing, G., Gu, X., Gao, X., Linney, E., and Zhao, Q. (2008) Retinoid regulation of the zebrafish *cyp26a1* promoter. *Dev. Dyn.* 237(12):3798-3808