

# Zebrafish Core Facility – Available Background Lines 2024

## Wildtype Lines (Homogenous lines with high reproducibility)

### **AB**

The classic zebrafish wildtype line derived from lines A and B. The line was created by selecting females producing high quality haploid embryos in order to reduce the number of lethal genetic mutations and crossing them to unselected males. The AB line is the most commonly used background zebrafish line in research.

### **Tubingen (TU)**

Originally purchased from a pet store in Tuebingen, Germany. This line has been used extensively for identification of genetic mutations affecting embryogenesis and was used for the zebrafish genome project.

### **Tupfel Longfin (TL)**

Phenotypically distinct from the AB and TU lines, the TL line is homozygous for the recessive *leo<sup>t1</sup>* and dominant *lo<sup>dt2</sup>* genes, resulting in a spotted body pattern and long fins respectively. This line is known for having highly fecund females and, as a result, are more prone to becoming eggbound than other wildtype lines.

## Mutant Lines (High In-Vivo Visualization Capabilities)

### **Casper**

The Casper line was originally created for better visualization with in-vivo transplantations. The line has since become very popular for many fluorescent transgenic lines as it allows for better visualization of associated gene expression, particularly in adults where pigmentation would typically impair visualization. The Casper line is the result of two recessive mutations that prevent differentiation of iridophores (*mpv17<sup>ag</sup>*) and melanocytes (*mitfa<sup>w2</sup>*).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2292119/>