

“*cot*” is a genuine seizure mutant of the silkworm, *Bombyx mori*.

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The behavioral mutant “*cot*” was isolated from a rearing colony of the “*Aojuku*” strain of *Bombyx mori* (Miki, 1998). This mutant larva showed seizure behavior when its body was stroked gently or rolled by hand a few times. In addition to the seizure behavior, various phenotypes have been reported in this strain, including low hatchability and high mortality during growth, small body size in the larval and pupal stages, distinct constriction of the abdominal segment, closed caudal legs and a spindle-shaped body in larvae, and slow feeding activity and excretion of feces. These observations suggested that *cot* displays severe growth defects. To clarify whether the morphogenic abnormality is related to the seizure behavior, we carried out backcrossing with the wild-type strain “*Daizo*” and examined the growth and behavior of the offspring. We found that the developmental abnormalities, including the mortality, body size and shapes, disappeared in the backcrossed animals, but also that all of the *cot* homozygotes still demonstrated seizure behavior with mechanical stimulation. These results indicate that seizure behavior is the only true phenotype of the *cot* mutant.