

*Anopheles arabiensis* Patton (Cellia)

**Strain Name:** KGB, MRA-339

**Place of Origin:** Kanyemba, Zimbabwe

**Colonization date:** 1975

**Established by:** Dr. Richard Hunt

**Deposited by:** Dr. Maureen Coetzee

**Genotype:** no information

**Phenotype:** red stripe, monomorphic for c+ (*collarless*)

**Karyotype:** polymorphic for 2Ra and 2Rb, fixed for inverted

2La.

**Insecticide Resistance:** none

**Larval Morphological Traits**



Collarless (c+) is caused by a uric acid build-up in the larvae. Expression is often variable but best seen in L4 larvae. KGB is monomorphic for c+.

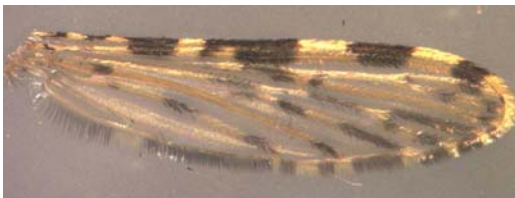


Red stripe-if present, individuals expressing red stripe are female.



When reared in a dark pan, larvae with wild-type eye color will melanize when compared to a cohort reared in a white pan.

**Adult Morphological Traits**



Morphological characteristics of *An. gambiae s.l.* adults.

**Authentication Methods used to confirm stock identity**

1. Examined immatures for the *collarless* (c+) trait: L4 larvae are monomorphic for c+.
2. Examined for red stripe in immatures: red stripe present.
3. Exposed 50 L4 larvae to 1ppm dieldrin for 1 hour to confirm susceptible status.
4. Examined adults microscopically for morphological characters: all individuals had standard features of *An. gambiae s.l.* and wild eye color.
5. Performed molecular *An. gambiae s.l.* identification: all *An. arabiensis*.
6. Performed PCR on the ND5 region to differentiate KGB from DONGOLA: all have KGB specific band with DONGOLA control.



**References referring to this stock:**

Du, W., T. S. Awolola, et al. (2005). "Independent mutations in the Rdl locus confer dieldrin resistance to *Anopheles gambiae* and *An. arabiensis*." *Insect Molecular Biology* 14(2): 179-183.

Gray, E. M. and T. J. Bradley (2005). "Physiology of Desiccation Resistance in *Anopheles gambiae* and *Anopheles arabiensis*." *American Journal of Tropical Medicine and Hygiene* 73(3): 553-559.

Helinski, M., A. Parker, et al. (2006). "Radiation-induced sterility for pupal and adult stages of the malaria mosquito *Anopheles arabiensis*." *Malaria Journal* 5(1): 41.

Walker, E., A. Thibault, et al. (2007). "Identification of field caught *Anopheles gambiae* s.s. and *Anopheles arabiensis* by TaqMan single nucleotide polymorphism genotyping." *Malaria Journal* 6(1): 23.

Wilkins, E., P. Howell, et al. (2007). "X and Y chromosome inheritance and mixtures of rDNA intergenic spacer regions in *Anopheles gambiae*." *Insect Molecular Biology* 16(6): 735-741.

Wilkins, E. E., P. I. Howell, et al. (2006). "IMP PCR primers detect single nucleotide polymorphisms for *Anopheles gambiae* species identification, Mopti and Savanna rDNA types, and resistance to dieldrin in *Anopheles arabiensis*." *Malaria Journal* 5(1): 125.

**Related Sequences:**

*Anopheles arabiensis* strain KGB GABA receptor subunit (Rdl) gene, partial cds - Pubmed Accession Number AY787486