

SEX IDENTIFICATION OF TROPICAL GAR, *Atractosteus tropicus*, JUVENILES BY VITELLOGENIN DETECTION IN SKIN MUCUS

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The objective of this study was to validate a new technique for sex identification in tropical gar juveniles by detecting and quantifying the protein vitellogenin (VG) in the skin mucus. Tropical gars do not present sexual dimorphism and sex ID becomes very important for aquaculture and fisheries activities. The conventional methods are generally invasive and require abundant manipulation. The presence of VG in plasma of females and the possibility of its detection in epithelial mucus can provide a very easy way to determine the sex of a fish. Ten juvenile fish from our laboratory were used in this experiment. Five fish received injections of 1 mg/kg of 17β -Estradiol every 5 days during a month and five fish did not receive Estradiol. Previous to each injection mucus samples were taken from each fish and were analyzed using SDS-PAGE anti-vitellogenin serum was used for VG detection.

A proteic band was obtained after three weeks of injections. This band corresponds to the same band detected for plasma VG. The analysis of this band with VG antibodies confirm the presence of the protein. Therefore, this easy and non-invasive technique can be used for tropical gar sex ID. We are currently collecting mucus from adult fish to validate the method with males and females from our broodstock.

Figure 1. SDS-PAGE from skin mucus of *A. tropicus* juveniles showing the band corresponding to VG..

