

Shimizu M., Fukada H., Fujita T., Hiramatsu N., Hara A. 2000. Serum levels of precursors to vitelline envelope proteins (choriogenins) in Sakhalin taimen after treatment with oestrogen and during oocyte growth. *Journal of Fish Biology*, 57: 170–181. doi: 10.1111/j.1095-8649.2000.tb00784.x

In Sakhalin taimen *Hucho perryi* two choriogenins have been identified in serum, designated high- and low-molecular-weight vitelline envelope-related protein (*h*VERP and *l*VERP). Two immunoassays were developed using specific antibodies; single radial immunodiffusion (SRID) and enzyme-linked immunosorbent assay (ELISA), for measurement of the precursors to vitelline envelope proteins. ELISA measures *h*VERP and *l*VERP in serum at concentrations as low as 16 and 47 ng ml⁻¹, respectively. Using these immunoassays, changes in serum levels of VERP were measured after treatment with E₂ and during oocyte growth. When immature 2-year-old taimen were injected with 2 mg E₂ per kg body weight, both VERPs were induced in serum within 24 h. In the course of the first ovulation, serum VERPs levels increased in September (8 months before ovulation), reached maximum in January, and decreased sharply prior to ovulation in May. These changes generally paralleled that of vitellogenin except for the drastic decrease of VERPs in May.