

**Figure 2**

Five-day OSE culture maintained in DMEM-HG medium with phenol red. **a)** Phase contrast microscopy of a live cell with a large oocyte phenotype (120 μm in diameter) shows a centrally located nucleus with nucleolus and perinuclear accumulation of cell organelles. **b)** Larger cell reaching 180 μm shows similar morphology. **c)** The cell presented in panel **b** stained for CK18 shows cytoplasmic staining with an accumulation of CK18 immunoexpression in the perinuclear space (arrowhead). **d)** The same cell in CK18 (brown) and ZP (blue) double color immunostaining (CK/ZP) shows high density of ZP expression in the perinuclear space (compare with panel **c**). **e)** Control staining shows no reactions in OSE cells when the anti-HILA DR antibody was used in place of the primary antibody. **f)** A cluster of cells exhibiting epithelial phenotype shows nuclear ZP expression (arrowhead) and differentiation into large cells (arrows). **g)** Another cluster subjected to the ZP/CK,5,6,8,17 double staining shows dark-blue staining of smaller epithelial cells (arrowhead), which diminishes in more differentiated larger cells (arrow). Bar in (a) for a-e.