

Cellular Distribution of the Centrosomal Protein Recognized by a Monoclonal Antibody, b2 During the Mouse Early Development

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A pair of centrioles and pericentriolar materials constitute the centrosome as MTOC in most animal cells. However, the centrioles do not exist during meiotic division of oocytes and mitotic division of early embryo and begin to appear by the blastosyst stage in mouse embryos. To identify centrosomal components in mouse gametes and ealy embryos, we used a newly developed b2 monoclonal antibody. We identify that newly developed anti-b2 monoclonal antibody recognized the centrosome and other cellular components in CHO cells. It was found that b2 centrosomal antigen was present as spots in the cytoplasm and nucleus including the centrosome of later stage of embryos. Interestingly, during male germ cell development b2 centrosomal protein was distributed in the nuclei and Golgi of spermatocytes and spermatids, respectively. In mature spermatozoa the antigen was distributed in the centrosome just beneath the sperm head, and tail region.