6. SUMMARY

Present study was aimed at isolating, purifying and characterization of catla Ig. Further, MAbs raised against purified Ig used for epitope analysis and detection of Ig. Following are the salient findings of the study.

- Catla immunoglobulins could be purified from the whole serum in a single step by affinity chromatography on BSA-CL agarose column.
- The purified immunoglobulin had a molecular weight of 870 kDa in non-reducing SDS-PAGE.
- The heavy chain and light chain had a molecular weight of 84 and 23 kDa in SDS-PAGE.
- Purified immunoglobulins were used for immunization of BALB/c mice for production of hybridomas. Four monoclonal hybridomas C6E2, C6F7, C5H3 and C1F3 were produced.
- All the four clones C6E2 (IgG2a), C6F7 (IgG1), C5H3 (IgM) and C1F3 (IgM) recognized heavy chain of Ig in Western blot.
- Sensitivity of the MAbs was 15 ng µl⁻¹ (C6E2 and C6F7) and 30 ng µl⁻¹ (C5H3 and C1F3).
- Among the four MAbs, only C5H3 could recognize mucus Ig of catla.
- Epitope analysis revealed that all the four MAbs could recognize epitopes of other two Indian major carps (rohu and mrigal).
- Two MAbs (C5H3 and C1F3) targeted epitopes was common for all cyprinids used in the study.
- A MAb (C6E2) based ELISA was developed for detection of catla Ig.