

Ovine placental eluate immunoglobulins recognise isologous and third party acid-treated trophoblast microvesicle antigens in vitro

Abstract:

Placental microvesicles were prepared from ovine placentae and immunoglobulins eluted with 0.5 M glycine buffer pH 2.5. The ability of eluate immunoglobulins to re-associate with isologous (self) and third party acidified microvesicles was tested by ELISA. Ovine placental immunoglobulins re-associated with isologous and third party acidified microvesicles suggesting that at least 2 types of antigenic epitopes I and II maybe expressed on the ovine placentae. Type I antigens may be present on placentae of all ovines while type II epitopes may be paternally derived, hence unique to each pregnancy. Analysis by SDS PAGE revealed the heavy and light chains of IgG at 57 and 27 kDa, respectively, together giving a relative molecular weight of 158 kDa. Results suggest that immunoglobulins produced to placental microvesicle antigens may be directed to some but not all antigenic epitopes expressed on the trophoblast, possibly defining a mechanism by which the foetus evades maternal immunological rejection.