NOVEL ANTAGONIST ANTIBODIES AND THEIR FAB FRAGMENTS AGAINST GPVI AND USES THEREOF

The present invention discloses novel antibodies that specifically bind to the human platelet membrane protein Glycoprotein VI (GPVI) and their monovalent fragments or derivatives. The antibodies of the invention are antibodies from hybridoma clone 390 and fragment antibodies thereof able to induce a GPVI depletion phenotype. These antibodies and Fab fragments are able to block collagen binding and thus preventing platelet activation by collagen. The invention also relates to hybridoma clones and expression plasmids for the production of disclosed antibodies and Fab fragments. The present invention further refers to the uses of monovalent antibody fragments to manufacture research, diagnostic and immunotherapeutic agents for the treatment of thrombosis and other vascular diseases. The invention also concerns a Fab bearing a molecule at the C-terminal extremity, as well as method for prevention of recognition of Fab by antibodies using such modified Fab. The invention concerns a method for prevention of platelet activation when an anti-GP VI Fab is used.

(No figure)