

ANTI-TENASCIN C ANTIBODIES AND USES THEREOF

The present invention relates to antibodies for binding the fibrinogen-like globe (FBG) domain of tenascin-C and their use in the diagnosis, determination of prognosis and/or treatment of disorders associated with chronic inflammation, as well as methods of identifying such antibodies.

Inflammation is the complex biological response of tissues to harmful stimuli, such as pathogens, tissue damage, or irritants. It is a protective attempt by the tissue to remove the injurious stimuli as well as initiate the healing process for the tissue. Abnormalities associated with inflammation comprise a large, unrelated group of disorders which underlie a variety of human diseases (inflammatory disorders). Examples of diseases with an inflammatory aspect include (but are not limited to) asthma, autoimmune disease, glomerulonephritis, allergy (hypersensitivities), cancer, inflammatory bowel diseases, reperfusion injury, rheumatoid arthritis and transplant rejection.

In particular, chronic inflammation is a debilitating and serious condition associated with many of the above diseases and is characterised by persistent inflammation at a site of infection or injury, or persistent inflammation of an unknown origin, or in relation to altered immune responses such as in autoimmune disease.

Rheumatoid arthritis (RA) is a typical example of, though by no means the only, a chronic inflammatory condition. RA is characterised by synovial inflammation and destruction of joint cartilage and bone mediated by persistent synthesis of pro-inflammatory cytokines and matrix metalloproteinases (MMPs). Biological compounds that suppress the synthesis of inflammatory cytokines such as TNF α and IL-6 are successful at treating RA in the short-term. However, repeated treatments are required, which renders this an expensive therapeutic approach, and does not provide long-term remission. Furthermore, total systemic suppression of cytokine function is not without inherent problems such as increased infectious risk. Thus, despite advances in care, there remains an unmet need for an economical mode of treatment of chronic inflammatory conditions that is efficacious over the long term (Smolen (2006) and Williams (2007)).

The mechanisms that underpin disease chronicity remain unclear and the factor(s) that drive the prolonged expression of inflammatory and destructive mediators are currently unknown.