SUMMARY

The present invention relates to the field of Biotechnology and more particularly to the mutated polypeptides of TGFβ molecule whose primary sequence has a high homology with the sequence of human TGFβ. These muteins lose their ability to interact with ALK5 but maintain their ability to interact with other receptors that are part of the receptor complex (TβRII and TβRIII). They have the property of antagonizing the signaling of all natural variants of TGFβ ligands, dependent of ALK5 recruitment in the receptor complex, and have significant immunomodulatory effects. The present invention relates to pharmaceutical compositions comprising as active principle the polypeptides or fusion proteins disclosed and their use thereof given their modulating effect on the immune system in diseases such as cancer, diseases accompanied by fibrosis and chronic infectious diseases.