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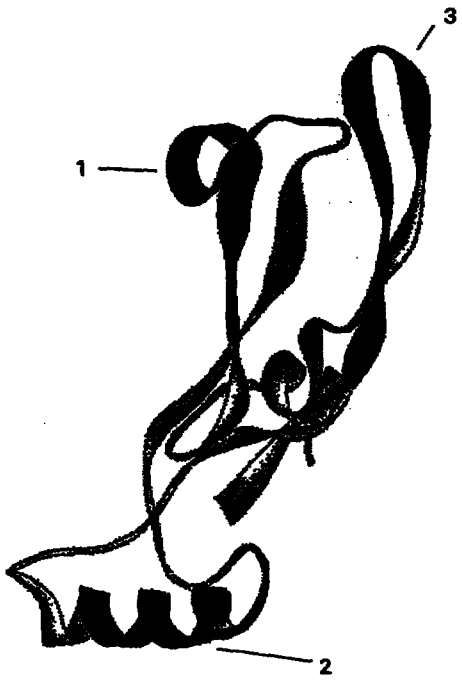
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(54) Title: METHOD FOR DOWN-REGULATING GDF-8 ACTIVITY



(57) Abstract: Disclosed are novel methods for increasing muscle mass by means of immunization against Growth Differentiation Factor 8 (GDF-8, myostatin). Immunization is preferably effected by administration of analogues of GDF-8 which are capable of inducing antibody production against homologous GDF-8. Especially preferred as an immunogen is homologous GDF-8 which has been modified by introduction of one single or a few foreign, immunodominant and promiscuous T-cell epitopes while substantially preserving the tertiary structure of the homologous GDF-8. Also disclosed are nucleic acid vaccination against GDF-8 and vaccination using live vaccines as well as methods and means useful for the vaccination. Such methods and means include methods for identification of useful immunogenic GDF-8 analogues, methods for the preparation of analogues and pharmaceutical formulations, as well as nucleic acid fragments, vectors, transformed cells, polypeptides and pharmaceutical formulations.

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