

water soluble physiologically inactive carrier; (2) adding CT solution to this antibody to form a CT/antibody/carrier complex. Medium component is washed off the CT recovered; (3) treating the pure CT to convert it into a toxoid comprising (I) and a procholera toxin comprising cholera toxin subunit-A; and (4) isolating the toxoid from the toxoid/procholera toxin mixture. CT is a polymer of mol.wt. about 84 000 and comprises 1 subunit-A and 5 subunit-B. (I) Is of use in ganglioside GM1 determination and as a cholera vaccine. High yields of (I) can be obtained simply in this process which is suitable for large-scale application. In an example, purified CT was converted to (I) by dissolving it in phosphoric acid buffer followed by dialysis with glycine/HCl buffer to produce toxoid which was isolated by centrifugation. The supernatant was dialysed with phosphoric acid buffer, filtered and finally freeze-dried to produce pure (I). 073-86

Strain-independent inactivated influenza vaccine production by removal of the hemagglutinin heavy HA1 chain

Inst. Angew. Virol.

E. German 228 737; 23 October 1985

In a new process for the production of inactivated influenza vaccines having an activity which (due to the presence of a common hemagglutinin (HA) structure or peptide sequence which is independent of the virus strain used) is independent of the actual epidemiological situation, the requisite surface structures are exposed on the surface of otherwise intact virus particles or incorporated into artificial lipid vesicles (viro-somes). The heavy (HA1) chain of the HA molecule is completely or largely separated from the light (HA2) chain by the action of proteases or by means of reducing and/or protein disintegrating substances, thus exposing the determinants of the light chain biologically active as fusion factors. Alternatively, immunologically active structures are produced by incorporation of isolated parts of the HA molecule into virosomes or by chemically linking these fragments with carrier molecules. Separation of the HA1 chain is effected by leaving for 1-30 min at pH 4.5-5.5 before subjecting to the action of trypsin-like proteases or reducing substances. The modified virus particle is then directly converted to vaccine. 074-86

Inactivated poultry plague vaccine from virus Newcastle disease culture in incubated hen egg

Phylaxia

Hung. T35 527; 29 July 1985

Inactivated fowl plague vaccine is prepared by inoculated SPF hen eggs incubated for 9-12 days, preferably for 10 days, with a Newcastle disease virus showing appropriate antigen activity. Allantoic fluid is collected from the embryos once the virus titre reaches its maximum and the pH is adjusted to 5.8-7.8, preferably 7.2. The virus is inactivated and treated with adjuvant. 075-86

Inactivated pigeon herpes virus vaccine from chicken fibroblast cell culture

Phylaxia

Hung. T35 528; 29 July 1985

Inactivated pigeon herpes virus vaccine is prepared by propagating pigeon herpes virus strains on chicken embryo fibroblast cultures, collecting the virus liquor once the virus titre reaches its maximum, inactivating the virus and treating the virus suspension with an oil phase immunoadjuvant. 076-86

Vaccine against *Schistosoma mansoni* containing soluble antigen from larvae or adults

US Dept Health Human Serv.

US 6741 600; 15 October 1985

A vaccine against *Schistosoma mansoni* is claimed. This comprises a membrane free soluble immunogen and is administered i.d. with an adjuvant which is especially BCG. Cercariae are mechanically transformed to scistosomula and purified on a density gradient, and after 3 h of incubation the larvae are washed, concentrated and frozen at -20°C. They are then thawed and treated with ultrasound for 15 s and are then centrifuged for 1 h at 100 000g to recover a soluble schistosomula antigen composition as a supernatant. This is standardized to 1.6 protein ml⁻¹. A similar soluble antigen product can also be prepared by ultracentrifugation of the homogenized adult worms. These contain 10-11 mg protein ml⁻¹. For use as vaccine, these compositions are injected as doses of 0.1 ml mixed with BCG. This vaccine is used to control or prevent schistosomiasis in mammals. Unlike known vaccines it does not require irradiation, multiple immunization of any harsh adjuvant. 077-86

Oral vaccine production by inactivating virus in the presence of protective compounds from the culture medium, adding further stabilizer and then freeze-drying

Lungenkr. Tuberk. Forschungsinst.

E. German 229 031; 30 October 1985

Production of oral vaccine comprises inactivating a virus in the presence of protective materials derived from the virus culture medium. Inactivation is by: (a) treatment with 1:15000 HCHO plus 9.5 kGy Co-60 gamma rays; (b) 1:5000 HCHO at 24°C; (c) by incubation at 28°C for up to 10 days; or (d) by treatment with e.g. u.v. light, microwaves or by splitting the virus. The inactivated virus, optionally after concentration by ultrafiltration, is then treated with an additional protective colloid mixture (e.g. skim milk at 10-15 vol.%) or with a simple stabilizer (e.g. dextran), and the resulting mixture is cooled to below 0°C and freeze-dried. If the virus is adequately attenuated in active form, then the inactivation step can be omitted. The vaccines are useful in human or veterinary medicine, particularly to protect against influenza. The process minimizes loss of antigenic/immunogenic components, prevents contamination, and all the steps are simple to perform. The final vaccine requires no further purification. 078-86

Genetic reassortment of rotaviruses for production of vaccines and vaccine precursors

US Dept Health Human Serv.

US 4571 385; 18 February 1986

A method of preparing a reassortant virus comprising combining a human non-cultivable rotavirus with a cultivatable animal rotavirus and producing a reassortant and neutralizing the animal rotavirus with a suitable antibody specific for the 34-38 kdalton glycoprotein of an animal rotavirus strain. 079-86

New DNA sequences of Epstein-Barr virus genome useful in protein expression for viral antibody detection in blood serum, for vaccine production and as DNA probe

Wolf H.J.

Eur. 173 254; 5 March 1986

A DNA sequence corresponds to at least part of an Epstein-Barr virus (EBV)-related antigenic protein, such as proteins p150, 143, 138, 110, 105, 90, 80 or 54 or gp 250/300. It also preferably contains the respective regulatory sequences in the 5' and 3' flanks. The DNA sequence may be inserted into recombinant plasmids pUC6130 or pUC635, pUCP400 etc. The DNA sequence also contains in reading frame at least two regions of a DNA sequence as defined above and derived from a single EBV genome or from different genomes. It may contain at its 3' end 3-15 Arg codons followed by a stop codon, and at its 5' end, an oligonucleotide encoding an