

OVERVIEW OF BIOLOGICAL ACTIVE SUBSTANCES OF NON-RECOMBINANT ORIGIN

June 2007

This table is a non-exhaustive list of biological active substances/biological medicinal products that do not belong to one of the categories that are already considered as biological active substances/biological medicinal products by default in the current legislation (such as: recombinant proteins, monoclonal antibodies, blood products, immunological medicinal products such as sera and vaccines, allergens, and advanced technology products such as gene and cell therapy products).

| Active ingredient | Type of substance, source | Administration route | Trade names (not exhaustive) | EU-procedure number |
|---|---|---|--|----------------------|
| Human chorionic gonadotrophin ¹⁾ | Glycoproteine, extract from human urine | Injection, IM, SC | Pregnyl, 500/1500/5000 IE Pregnyl // 5000IE Choragon 1500 Choragon 5000 | |
| Menotrophin | FH/FSH extract from human urine | Injection, IM, SC | Humegon 75/150IE Menegon 150 HMG Ferring 150 Menopur 75 | |
| Urofollitrophin ¹⁾ | FSH extract from human urine | Injection SC | Bravelle 75 IE Fostimon | UK/H/697 FR/H/282 |
| Streptokinase, ¹⁾ | Protein from Streptococcus cultures | Injection IV, topical | Streptase 100/250/750/1500 kIE | |
| Streptodornase | Protein from Streptococcus cultures | Injection IV | | |
| Urokinase ¹⁾ | Tissue culture of human renal human renal cells | Injection IV | Medacinase 10/50/100/250/500 kIE Urokinase-Kabi 50/100/250/500 kIE | |
| Aprotinin ¹⁾ | Polypeptide from bovine lung | Injection IV Recently also as component of fibrine glues | Trasylol 500.000 IE | |
| Hyaluronidase ¹⁾ | Extract from bovine or ovine testes | Injection eye | Hyason | |
| Protamine ¹⁾ | Polypeptide from sperma/testes of fish species | Injection IV, IM | Protamine 1000/5000 'ICN' Protamine Leo Pharma | SE/H/562 |

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|--|--|----------------------------------|--|----------------------|
| Botulinum toxin Type A ²⁾ | Protein from Clostridium botulinum culture | Injection, IM | Botox 100E Dysport 500E Vistabel | FR/H/230 |
| Botulinum toxin Type B | Protein from Clostridium botulinum | Injection, IM | Neurobloc 5000 IE/ml | EMEA/H/C/301 |
| Tuberculin ²⁾ | Filtrate Mycobac.tub culture | Injection intracutaneous | Tuberculine PPDRT23 SSI | |
| BCG for bladder instillation ²⁾ | M. bovis, var. BCG | Intravesical | BCG-medac Immucyst Onco-Tice | DE/H/001 DE/H/367 |
| Heparin ¹⁾ | Heparin, | Injection IV SC | Heparine Leo | |
| Chondroitin sulphate sodium | heparin | Oral | Condral/Condrosulf | |
| Dalteparine ¹⁾ | LMM heparin | Injection IV SC | Fragmin; Dalteparin Pfizer | SE/H/549 |
| Enoxaparine ¹⁾ | LMM heparin | Injection SC | Clexane | |
| Nadroparine ¹⁾ | LMM heparin | Injection SC | Fraxiparine; Fraxodi; Nadroperin GSK | DE/H/809 |
| Tinzaparine ¹⁾ | LMM heparin | Injection SC | Innohep | |
| Reviparin ¹⁾ | LMM heparin | Injection SC | Clivarin | SE/H/524 |
| Parnaparine ¹⁾ | LMM heparin | Injection SC | Fluxum | |
| Certoparine ¹⁾ | LMM heparin | --- | --- | |
| Danaparoid sodium ¹⁾ | Mixed glucosaminoglucans | Injection SC | Orgaran | NL/H/142 |
| Sodium hyaluronate | glycosaminoglycans | Intraarticular injection, dermal | Hyalgan/ Ialugen Plus | |
| Pancreatin ¹⁾ | Amylase, protease and lipase, prepared from mammalian pancreas | Oral | Creon/Creon Forte/Pancrease/Panzytrat | |
| Pancreatin/aspergillus | Protease, lipase and cellulose | Oral | Combizym | |
| Asparaginase | Enzyme from <i>E. coli</i> | Injection IM, IV | Kidrolase Paronal | |
| Crisantaspase | Asparaginase from <i>Erwinia chrysanthemi</i> | IM, SC, IV | Erwinase | |
| Anti T-lymphocyte immunoglobulin for human use, animal ²⁾ | Animal antiserum (from a.o. rabbit, horse) | IV | ATG Fresenius, Thymoglobulin, Lymphoglobulin | |

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|---|--|----------------------|---|---------------------|
| Polyclonal sheep anti-digoxin | Animal antiserum | IV infusion | Digitalis antidot | |
| Hu IFN-alfaLe | Native interferon alfa produced through viral stimulation of leucocytes | Injection SC | Multiferon | |
| | | | | |
| Insulin bovine ¹⁾ | Bovine pancreas | SC, (IM, IV) | | UK/H/430 |
| Insulin porcine ¹⁾ | Porcine pancreas | SC, (IM, IV) | | |
| Pepsin powder ^{1), 3)} | Bovine/porcine pancreas | | | |
| Trypsin ¹⁾ | Bovine/porcine pancreas | | | |
| Chymotrypsin ¹⁾ | Bovine/porcine pancreas | | | |
| Glucagon ⁴⁾ | Bovine/porcine pancreas | SC, (IM, IV) | | |
| | | | | |
| <i>Escherichia coli</i> (Nissle 1917) | strain of <i>Escherichia coli</i> (NISSLE 1917) in viable form | oral | MUTAFLO, MUTAFLO mite | |
| Lysatum bacteriale OM 85 cryodesiccatum | lysatum bacteriale mixtum (<i>Haemophilus influenzae</i> , <i>Diplococcus pneumoniae</i> , <i>Klebsiella pneumoniae et ozenae</i> , <i>Staphylococcus aureus</i> , <i>Streptococcus pyogenes et viridans</i> , <i>Neisseria catarrhalis</i>) | oral | BRONCHO-VAXOM PRO ADULTIS BRONCHO-VAXOM PRO INFANTIBUS | |
| OM-89 cryodesiccatum | Lysatum <i>E. coli</i> cryodesiccatum | oral | URO-VAXOM | |
| Lysatum bacteriale mixtum | <i>Lactobacillus acidophilus</i> , <i>Lactobacillus helveticus</i> , <i>Lactobacillus lactis</i> , <i>Lactobacillus fermentatum</i> , <i>Streptococcus pyogenes A</i> , <i>Enterococcus faecium</i> , <i>Enterococcus faecalis</i> , <i>Streptococcus sanguis</i> , <i>Staphylococcus aureus</i> , <i>Klebsiella pneumoniae</i> , <i>Corynebacterium pseudodiphtheriticum</i> , <i>Fusobacterium (Fusiformis) nucleatum</i> 5,00 mg, <i>Candida albicans</i> | oral | IMUDON | |

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| Lysatum bacteriale mixtum | <i>Streptococcus pneumoniae</i> typ I; <i>Streptococcus pneumoniae</i> typ II; <i>Streptococcus pneumoniae</i> typ III; <i>Streptococcus pneumoniae</i> typ V; <i>Streptococcus pneumoniae</i> typ VIII; <i>Streptococcus pneumoniae</i> typ XII; <i>Streptococcus pyogenes</i> A; <i>Streptococcus dysgalactiae</i> C; <i>Enterococcus faecium</i> ; <i>Enterococcus faecalis</i> ; <i>Streptococcus G</i> ; <i>Staphylococcus aureus</i> ; <i>Haemophilus influenzae</i> typ B; <i>Moraxella catarrhalis</i> ; <i>Neisseria subflava flava</i> var.; <i>Neisseria subflava perflava</i> var.; <i>Klebsiella pneumoniae</i> ss <i>pneumoniae</i> ; <i>Acinetobacter calcoaceticus</i> <i>baumanii</i> var. | Nasal spray | IRS 19 | |
| Lactobacillus acidophilus lyophilisatus | | Vaginal capsule | GYNOFLOR | |
| Lactobacillus rhamnosus, Lactobacillus delbrueckii subsp. Bulgaricus, Streptococcus salivarius subsp. termophilus | | Vaginal capsule | FERMALAC VAGINAL | |
| Lysatum bacteriale mixtum | <i>Staphylococcus aureus</i> , <i>Streptococcus mitis</i> , <i>Streptococcus pneumoniae</i> , <i>Streptococcus pyogenes</i> , <i>Klebsiella pneumoniae</i> , <i>Branhamella catarrhalis</i> , <i>Haemophilus influenzae</i> | oral | LUIVAC | |

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|--|--|--------------------------------------|--------------------------------------|---------------------|
| Lactobacillus acidophilus, Lactobacillus rhamnosus | <i>Lactobacillus acidophilus</i> , <i>Lactobacillus rhamnosus</i> | oral | LACIDOFIL | |
| Escherichia coli O83 : K 24 : H 31 lyophilisatum | <i>Escherichia coli</i> O83 : K 24 : H 31 | oral | COLINFANT NEW BORN | |
| Glycoproteini Klebsiella pneumoniae extractum | highly purified glycoproteins (P1 and F1) from the strain of <i>Klebsiella pneumoniae</i> | oral | BIOSTIM | |
| Phagi particulae contra Staphylococcus polyvalens | antistaphylococcus lysate from phagi | oral | STAFAL | |
| Lactobacillus acidophilus | <i>Lactobacillus rhamnosus</i> (3 strains), <i>Lactobacillus vaginalis</i> (3 strains), <i>Lactobacillus salivarius</i> (1 strain), <i>Lactobacillus fermentum</i> (1 strain) | Injection IM | SOLCOTRICHOVAC | |
| Thymostimulin (calf) | Polypeptide immunostimulant factor extracted from calf thymus | --- | --- | |
| Calf blood low molecular weight portion | A low molecular fraction of calf blood | eye gel, mouth paste | Solcoseryl | |
| cerebrolysin | A low molecular fraction of polypeptides extracted from porcine brain | Injection IM, IV | Cerebrolysin | |
| Phospholipids bovine/ porcine | A low molecular fraction of phospholipids extracted from bovine lung | Oral, Endotracheopulmonal surfactant | Essentiale forte/ Survanta/ Curosurf | |
| Collagenase | Proteolytic enzyme from Clostridium culture | dermal | Iruxol mono | |
| Deoxyribo-nuclease | Enzyme from beef pancreas | Dermal, solution for inhalation | Pulmozyme/Fibrolan | |
| | | | | |
| Fibrinolysine bovine | enzyme from bovine plasma | dermal | Fibrolan | |
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|---|--|----------------------|------------------------------|---------------------|
| collagen | Protein from mammalian connective tissue | --- | ---- | |
| Porcine transfer factor | A low molecular fraction of porcine blood leucocytes | oral | Imunor | |
| Ribosomes of Klebsiella pneumoniae, Haemophilus influenzae A, Streptococcus pyogenes group A and Streptococcus pneumoniae | Desintegrated cells of microorganisms | oral | Ribomunyl | |
| Membrane proteoglycans Klebsiella pneumoniae | | | | |

¹⁾ Ph. Eur monograph of drug substance available

²⁾ Ph. Eur monograph of drug product available

³⁾ Pepsin powder PhEur is prepared from gastric mucosa of pigs, cattle or sheep- Pancreas is not indicated as source

⁴⁾ The monograph for animal sourced glucagon has been deleted in 2006