

Patents granted**Diagnostic applications:****Epstein-Barr virus:****VCA-markers p18 and p40:** (first filed: 10-03-1993)

- For diagnosis of EBV carrier status (+/-) and diagnosis of acute, chronic and malignant disease through detection of anti-VCA IgM, IgG and IgA antibodies
- MoAb for detection of EBV antigen in body fluids and tissues
- Seq. recombinant antigen and detection of EBV genome and mRNA

Europe(DE,FR,CH,AT,BE,SE,IT,DK,ES,PT,IE,GB,NL): EP0574048, dd.14-08-2002.

Finland:FI114802,dd.31-12-2004,

Australia: AU666920, dd.09-07-1996

New Zealand: NZ225077, dd.09-07-1996

USA: US5424398,dd.13-06-1995, US6008327, dd.28-12-1999, US6365717, dd.02-04-2002

Japan: JP4135996, dd.13-06-2008, JP4365440, dd.28-08-2009

Indonesia: ID006034,dd.15-03-2001

Hong Kong: HK1001221, dd.30-01-2003

Korea: KR0291247, dd.09-03-2001

South Africa: ZA931797, dd.29-12-1993

EBNA1 immunodominant peptides: (first filed: 13-09-1993)

- For diagnosis of EBV carrier status (+/-) and diagnosis of acute, chronic and malignant disease through detection of anti-EBNA1 IgM, IgG and IgA antibodies
- MoAb for detection of EBV antigen in body fluids and tissues
- Seq. recombinant antigen and detection of EBV genome and mRNA

Europe (DE,FR,CH,AT,BE,SE,IT,DK,ES,PT,IE,GB,NL): EP0607425, dd.12-05-2004.

Finland:FI114781 dd.31-12-2004,

Australia: AU667745, dd.13-08-1996

USA: US5965353 dd.12-10-1999

Canada: 2120342, dd.16-11-2004

Japan: JP4155591 dd.07-18-2008, JP4368406, dd.09-04-2009

Hong Kong: HK1001461, dd.14-01-2005

Korea: KR0384250, dd.02-05-2003

EAd immunodominant peptides: (first filed: 28-05-1996)

- For diagnosis of EBV carrier status (+/-) and diagnosis of acute, chronic and malignant disease through detection of anti-EBNA1 IgM, IgG and IgA antibodies
- MoAb for detection of EBV antigen in body fluids and tissues
- Seq. recombinant antigen and detection of EBV genome and mRNA

Europe (DE,FR,CH,AT,BE,SE,IT,DK,ES,PT,IE,GB,FI,NL): EP0747481, dd.19-12-2001.

Australia: AU707301, dd.21-10-1999

USA: US5843405 dd.01-12-1998, US6143865, dd.07-11-2000

Canada: 2178057, dd.07-12-1996

Japan: JP4319703 dd.5-06-2009

Hong Kong: HK1001164, dd.14-06-2002

Korea: KR0523972, dd.19-10-2005

Indonesia: ID0009429, dd.19-12-2002

Multiplex use of VCA/MA+EBNA1 in single assay format: (first filed: 09-09-1994)

- For one-step diagnosis of EBV carrier status (+/-) and diagnosis of acute, chronic and malignant disease through detection of anti-EBV IgM, IgG and IgA antibodies
- MoAb for detection of EBV antigen in body fluids and tissues

Europe: (DE,FR,CH,AT,BE,SE,IT,DK,ES,PT,IE,GB,FI,NL): EP-0649904, dd.22-01-2003**Finland:** FI113298, dd.31-02-2004**Australia:** AU679545, dd. 23-10-1997**USA:** US5827646, dd.27-10-1998**Canada:** CA2131874, dd.28-03-2006**Japan:** JP3547493, dd.23-04-2004**Korea:** KR0378942, dd.24-03-2003**Hong Kong:** 1001222, dd.21-11-2003**Indonesia:** ID008232, dd.23-03-1995 (pending)**Primers & probes for EBV nucleic acid detection:** (first filed 01-03-1999)

- Seq. for detection of EBV genome and mRNA; combi EBNA1, LMP1, BARF1
- For tumor diagnosis and definition viral activity, carcinoma or lymphoma

Europe: (DE,FR,CH,AT,BE,SE,IT,DK,ES,PT,IE,GB,FI,NL): EP-1060271, dd.22-04-2009**Australia:** AU757404, dd. 19-06-2003**USA:** US7026112, dd.11-04-2006**Canada:** WO9945155, dd.10-09-2009 pending**Japan:** WO9945155, dd.10-09-2009, pending**Korea:** WO9945155, dd.10-09-2009, pending**Hong Kong:** WO9945155, dd.10-09-2009, pending**Indonesia:** WO9945155, dd.10-09-2009, pending**Cytomegalovirus:****Combi-peptides for CMV serology:** (first filed: 09-07-1997)

- Peptide combinations for IgM and IgG serology and diagnosis of acute latent CMV infection
- Antibody reagents for CMV antigen detection in body fluids

Europe: (DE,FR,CH,AT,BE,SE,IT,DK,ES,PT,IE,GB,FI,NL): EU0960336 dd. 09-10-2002**Australia:** AU735981, dd.01-11-2001**Canada:** CA2259967, dd.11-04-2006**USA :** US6936251 dd.30-08-2005**Korea:** KR0624517, dd.08-09-2006**Japan:** WO 9802746, dd.22-01-1998, pending**South Africa:** ZA976196, dd.25-11-1998**Indonesia:** ID972439, dd.14-07-1997, pending**Primers and probes for CMV nucleic acid detection:** (first filed 18-05-1995)

- Seq. and technique for detection of CMV genome and mRNA; gene pp67
- For diagnosis of acute infection and therapeutic decision making

Europe: (DE,FR,CH,AT,BE,SE,IT,DK,ES,PT,IE,GB,FI,NL): EP0729518, 28-11-2001**Australia:** AU707317, dd. 28-10-1999**Canada:** CA2172142, dd.18-08-1995, pending**USA:** US6010847, dd.04-01-2000; US6306601, dd.23-10-2001**Korea:** KR0399715, dd.17-09-2003**Japan:** WO9606191, dd. 29-02-1996, pending

Cytomegalovirus: (continued)**Primers and probes for CMV nucleic acid detection:** (first filed 25-02-1998)

- Seq. and technique for detection of CMV genome and mRNA; gene IE1
- Europe:** (DE,FR,CH,AT,BE,SE,IT,DK,ES,PT,IE,GB,FI,NL): EP97200623.2, dd.03-09-1998, pending
Australia: AU735471, dd.25-10-2001
USA: US09367364, dd. 25-02-1998, pending
Japan: JP1998537329, dd.25-02-1998, pending
Korea: KR0561501, dd.09-03-2006
Indonesia: ID990917, dd. 25-02-1998, pending
South Africa: ZA981491, dd. 28-10-1998

Therapeutic & Vaccine Applications**Epstein-Barr virus:**

- Seq. and use of EBV- LMP1 -LMP2 and BARF1 extracellular domains for tumor vaccination and antibody-based therapeutics
- Europe:** (DE,FR,CH,AT,BE,SE,IT,DK,ES,PT,IE,GB,FI,NL): (PCT)EP02-00997, dd. 01-30-2002, pending
USA: US7811581, dd.12-10-2010
China: ZL02807469.6, dd.07-09-2011
Indonesia: WO2003-01651, dd.26-10-2011, pending