

**General**  
**GenePack DNA PCR tests**

*PCR tests for infection diseases –  
simple, fast economic, effective*

Test:  
Product Code:  
Manual

**GenePack DNA PCR tests** provide simple and convenient analysis of infection agents presence in biological samples. *GenePack DNA PCR tests* utilize technique based on Polymerase Chain Reaction, so the infection-specific DNA is detected in the sample.

All reagents required for PCR (Taq DNA polymerase, dNTPs, specific primers, salts and stabilizers) are lyophilized in PCR tubes (0,2 ml), only sample to be analyzed and specific buffer (provided in the kit) should be added before thermocycling. All reagents are lyophilized and stabilized, so *GenePack DNA PCR tests* can be transported at ambient temperature (+15- + 30 °C) and stored at +2-+8°C for a long time (more than 1 Year).

**Each kit contains:**

100 tubes with lyophilized reagents (1 tube – 1 reaction)  
Specific dilution buffer  
80 test tubes (colorless)  
10 positive controls (red stained or blue tubes)  
10 negative controls (blue stained)

**Introduction:**

Before analysis DNA from bio-samples should be prepared taking into account the source of the biomaterial.

- saliva, urine, tears, mucus and other samples with low concentrations of DNA, proteins, polysaccharides and fats;
- blood, tissue, cells suspension and other samples with high concentration of proteins, polysaccharides and DNA

All DNA purification kits can be used for DNA purification from bio-samples.

A maximal volume of 10 microliters of DNA purified from biosamples should be added into *GenePack DNA PCR test* tube, mixed with 10 microliters of dilution buffer. If necessary add water (PCR grade, sterile) to a final volume of 20 µl and the mixture is ready for thermocycling.

**The thermocycling program:**

- a) 2 min - 95 C
- b) 60 sec - 95 C  
40 sec - 58 C  
60 sec - 74 C  
repeat 45 cycles
- c) 120 sec 74 C

*.. a good decision ..*

Primer for	Annealing temp.
HPV	56 °C
HPV 16, 18	60 °C
Adenovirus	60 °C
Mycobacterium tuberculosis	62 °C
For all others	58 °C

**Analysis:**

After thermocycling the sample should be loaded on the agarose gel, the gel is to be stained by Ethidium Bromide after electrophoresis, positive control samples should reveal the specific band, no band should appear in negative control samples. The presence or absence of the specific band indicate the presence or absence of the specific DNA in the biosample tested.

**Sensitivity:**

The sensitivity of the test is 10-100 copies of DNA template in 10 microliters of the sample. The problem of PCR inhibition and DNA losses during sample preparation can be solved by the addition of "Universal control DNA" into the sample just before DNA purification step.

The infection agents and corresponding amplicon fragments:

Cat.-No	DNA Infection agent	Index	Ampl.[bp]
A2041	Aspergillus fumigatus	Afu	456
B2090	Borrelia afzelii	Baf	445
B2042	Borrelia burgdorferi	Bpu	445
B2089	Borrelia garinii	Bga	445
B2110	Borrelia spp. (burgdorferi+garinii+afzelii)	Bor	445
L2072	Bovine leukemia virus	proBLV	347
B2043	Brucella melitensis	Bme(Bru)	442
C2040	Candida albicans	Cal	490
C2012	Chlamydia pneumonia	Cpn	448
C2013	Chlamydia psittaci	Cps	356
C2014	Chlamydia spp.	Chl	560
C2011	Chlamydia trachomatis	Ctr	410
E2063	Epstein-Barr virus	EBV	558
F2044	Francisella tularensis	Ftu	333
G2030	Gardnerella vaginalis	Gva	424
H2059	Haemophilis influenzae	Hin	381
H2023	Helicobacter pylori (ure)	Hpy-ure	381
B2049	Hepatitis B virus	HBV	473
H2054	Herpes simplex virus 1 type	HSV1	331
H2053	Herpes simplex virus 1/2 type	HSV1/2	360
H2055	Herpes simplex virus 2 type	HSV 2	432
C2062	Human cytomegalovirus	HCMV	451
H2056	Human herpes virus 6 type	HHV 6	371
H2098	Human herpes virus 7 type	HHV 7	437
H2057	Human herpes virus 8 type	HHV 8	272
P2065	Human papillomavirus, general	HPV gen	450
P2069	Human papillomavirus, high risk (16,18,31,33,35,39,45,51,52)	HPV h.r.	450
L2074	HumanT-Lymphotropic virus, 1/2 types	proHTLV 1/2	375
L2058	Legionella pneumophila	Lpn	511

*.. a good decision ..*



L2031	Leptospira interrogans	Lin	668
L2137	Leptospira spp.	Lep	423
L2032	Listeria monocytogenes	Lmo	226
M2084	Mobiluncus curtisii	Mcu	224
M2060	Moraxella catarrhalis	Mca	550
M2115	Mycobacterium (tuberculosis+bovis)	M(tu+bo)	234
M2016	Mycobacterium avium, subspp. Paratuberculosis	M(tu+bo))	268
M2026	Mycobacterium intracellulare	Min	234
M2015	Mycobacterium tuberculosis	Mtu	222
M2018	Mycoplasma hominis	Mho	282
M2017	Mycoplasma pneumoniae	Mpn	316
M2019	Mycoplasma genitalium	Mge	538
M2091	Mycoplasma spp. (Mge+Mho+Mpn+Mfe+Mpe)	Myc	316
N2020	Neisseria gonorrhoeae	Ngo	591
B2052	Parovirus B19	B19	743
P2022	Pneumocystis carinii	Pca	396
R2104	Rickettsia spp.	Ric	259
S2033	Streptococcus agalactiae	Sag	583
S2034	Streptococcus pneumoniae	Spn	567
S2103	Streptococcus pyogenes	Spy	609
T2021	Toxoplasma gondii	Tgo	523
T2050	Transfusion transmitted virus, general	TTV gen	276
T2035	Treponema pallidum	Tpa	325
T2036	Trichomonas vaginalis	Tva	771
U2038	Ureaplasma parvum, biovar 1	Upa	540
U2037	Ureaplasma (parvum+urealytic.)	Ure	554
U2039	Ureaplasma urealyticum, biovar2	Uur	435
V2061	Varicella-zoster virus	VZV	381
V2045	Vibrio cholerae (toxR)	Vch-toxR	624

**Your notes:**

*.. a good decision ..*