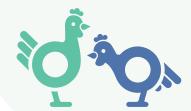
Poultry Veterinary Diagnostic Service

GENOVO



PORTFOLIO

Choosing Genovo is choosing the fast and simple way:

- A We charge an all-inclusive fee for all processing steps around the (RT-) qPCR and sequencing services, including receipt, pooling, preparation and storage of your samples, administration and final reporting; also our expert's consulting related to your sample sets is included. So choose parameters, send in, lean back and enjoy.
- B Our pricing structure for (RT-)qPCR is simple, transparent and easy to keep in mind. For the vast majority of parameters we charge 15.00 € per sample or pool. You will find only few exceptions, such as for our market-leading services in typing of IBDV and IBV.
- The (RT-)qPCR results may evoke your interest in going deeper? So choose Sanger or even Next Generation Sequencing (= NGS) services for most extensive scientific data. We also provide untargeted NGS for RNA to result in a huge but simple dataset that can be browsed conveniently. This »de novo« approach can be applied e.g. in unclear cases or for monitoring purposes.

By the way, did you notice the analogy between »de novo« and our name?

We are here for you:

- If you have any questions, or before sending samples to us for the first time kindly contact us. You will find our contact data at
 - www.genovo.de/contact/
- E Send your sample sets to Genovo GmbH, Kirchstrasse 3, 26197 Grossenkneten-Ahlhorn, Germany , please make sure that the shipment is accompanied by our sample submission form or some equivalent.
 - → www.genovo.de/downloads/





PORTFOLIO

SERVICES

A. Sample

Send us your sample and pay one lump sum per sample pool for any ordered service. For your convenience we also provide sampling cards with FTA technology optimized for our services (see below).

all-inclusive sample processing fee, per sample or sample pool

B. (RT-)qPCR

Choose which pathogen you want to detect, price per sample or sample pool.

PATHOGEN

| Virus | |
|---|-------|
| Adenovirus (FAdV) | |
| Astrovirus Chicken (CAstV) | |
| Astrovirus Turkey (TAstV) | |
| Chicken Anemia Virus (CAV) | |
| EDS-76/ Duck Adenovirus | |
| Encephalomyelitis Virus (AEV) | |
| Hemorrhagic Enteritis Virus of Turkeys (HEV) | |
| Herpesvirus of Turkey (HVT, screening for recombinant vaccines) | |
| construct-specific DIVA-qPCRs for rec. vacc. (on de | mand) |
| Infectious Bursal Disease Virus (IBDV) screening | |
| IBDV genogroup A1 | |
| IBDV genogroup A2 | |
| IBDV genogroup A3 | |
| IBDV genogroup A7 | |
| Infectious Bronchitis Virus (IBV) screening | |
| IBV variant Mass (GI-1) | |
| IBV variant Arkansas (GI-9) | |
| IBV variant D274 (GI-12) | |
| IBV variant 793b, 4/91, CR88, 1/96 (GI-13) | |
| IBV variant Q1 (GI-16) | |
| IBV variant QX (GI-19) | |
| IBV variant Italy02 (GI-21) | |
| IBV variant 02 (var02; GI-23) | |
| IBV variants of GII (incl. D181 & D1466) | |
| IBV variants of GVIII (incl. IB80) | |



Infectious Laryngotracheitis Virus (ILTV) Influenzavirus A (IVA) screening IVA H5 IVA H7 IVA H9 Leukosis Virus (endogenous ALV, DNA) Leukosis Virus (exogenous ALV, RNA; screening PCR with sequencing) Marek's Disease Virus (MDV) MDV DIVA Rispens Metapneumovirus Serotype A & B (aMPV, ART) Metapneumovirus Serotype C (aMPV, ART) Nephritis Virus 1 & 2 (ANV-1 & -2) PMV-1 screening PMV-1 pathotyping PMV-1 genotype II PMV-3 screening Poxvirus (FPV) Reovirus (av. Orthoreovirus; ARV) Reticuloendotheliosis Virus (REV) **Bacteria** Avibacterium paragallinarum thermophilic Campylobacter species Campylobacter hepaticus Enterococcus cecorum (Ecc) Mycoplasma MG / MS (combination) MG DIVA 6/85 & F-strain MG DIVA ts-11 MS DIVA MS-H Mycoplasma iowae (MI / Malacoplasma iowae) Mycoplasma meleagridis (MM / Mycoplasmopsis meleagridis) Ornithobacterium rhinotracheale (ORT) Pasteurella multocida Riemerella anatipestifer Salmonella spp. (without enrichment) Salmonella spp. after enrichment (no processing fee applies) Salmonella SE /ST (combination, serovar-specific) Salmonella SE DIVA (Sm24/Rif12/Ssq strain) Salmonella ST DIVA (Nal2/Rif9/Rtt strain) Salmonella Gallinarum Pullorum, 9R



Parasites

Eimeria spp.

Eimeria maxima, E. tenella & E. acervulina (short life cycle)

Eimeria maxima, E. brunetti & E. necatrix (long life cycle)

Eimeria mitis & E. praecox

Histomonas meleagridis (HM)

C. Sequencing

Choose Sanger or NGS of listed target genes or genomes, price per sample or sample pool.

PATHOGEN

ARV - partial sigma C gene (Sanger)

ALV (exogenous ALV, RNA; screening PCR with Sanger sequencing)

CAstV - partial Capsid protein gene (Sanger)

FAdV - partial hexon gene (Sanger)

Histomonas meleagridis (HM, for genotyping; Sanger)

IBDV - partial VP2 & VP1 genes (Sanger)

IBV - partial S1 gene (Sanger)

Influenzavirus H5 (IVA H5) - HA gene (Sanger)

Influenzavirus H9 (IVA H9) - HA gene (Sanger)

MDV - partial meq1 gene (Sanger)

MG - partial mgc2 gene (Sanger)

MS - partial vlha gene (Sanger)

aMPV - partial G gene (Sanger)

PMV-1 - partial F-gene incl. cleavage site (Sanger)

16S rRNA sequencing (Sanger)

Bacterial isolate characterization (NGS)

Untargeted full RNA (NGS, e.g. for monitoring) (per sample)

for up to 5 samples

for 6-11 samples

for ≥ 12 samples

Pathogen specific sequencing (NGS), e.g.

IBDV - segment A & B (VP2 & VP 1)

IBV - full S1 gene

IVA - full genome

and others on request

Serology*

ELISA Infectious Bronchitis Virus (IBV)

ELISA Infectious Bursal Disease Virus (IBDV)

ELISA Reovirus (av. Orthoreovirus; ARV)

ELISA Newcastle Disease Virus (NDV)

HIT Newcastle Disease Virus (NDV, PMV-1)

Further analyses on demand



| Bacteriology* | |
|--|--|
| Bacteriological examination - cultivation | |
| Clostridium spp selective enrichment | |
| MALDI-TOF mass spectrometry (bacteria) | |
| MALDI-TOF mass spectrometry (moulds) | |
| Sensitivity testing - agar diffusion test (ADT) | |
| Sensitivity testing - minimal inhibition concentration (MIC) | |
| Further analysis | |

Further analyses

* No processing fee applies

Further analyses, also for other livestock species, on request.

PRODUCTS

For your convenience we also provide sampling cards with FTA technology and tubes optimized for our services and shipment.

| G-Card (12 spots) |
|---|
| G-Card (12 spots, package of 100 cards) |
| G-Card NGS (1 spot) |
| G-safe tube (2ml) |
| G-safe tube (3ml) |
| G-safe tube (6ml) |
| NGS Sampling Box (shipment of liquids) |
| NGS Sampling Box (shipment of G-card NGS) |