



PCR Kits Product List

2010

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DNA Extraction and Electrophoresis

Different DNA extraction kits are available: The *DNAExtractor* is buffer-based and especially recommended for rather inhomogenous samples. The *DNAExtractor Clean* kit includes an additional sephacryl column cleaning step, it is especially recommended for soy products and grains in general. Furthermore, there is a special *DNAExtractor Fat* kit for DNA extraction from emulsifiers (lecithin), oils and fats available.

Our *GENESpin* is very convenient to use for all kind of food, feed and even bacterial cultures.

5224400605	<i>GENESpin</i>	DNA extraction kit for 50 samples
5224701901	Additional lysis buffer for <i>GENESpin</i>	1000 ml
5224700610	<i>DNAExtractor</i>	DNA extraction kit for 50 samples
5224700205	Additional lysis buffer for <i>DNAExtractor</i>	500 ml
5224700810	<i>DNAExtractor Clean</i> (with 50 DNA cleaning columns)	DNA extraction and purification kit for 50 samples
5224700310	DNA cleaning columns for <i>DNAExtractor</i>	100 columns
5224700710	<i>DNAExtractor Fat</i> for lecithin, oil and fat	DNA extraction kit for 60 samples
5224700110	Special lysis buffer for lecithin, oil and fat for use with <i>DNAExtractor Fat</i>	2 x 50 ml
5217720401	DNA Length Standard pUC18 HAIII size marker 26 – 501 bp	500 µl, 0.05 µg/µl
5216700201	<i>RNase</i>	5 mg/mL, 0.5 mL

Item	Description
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GMOScreen Kits for real-time PCR

Our most convenient and economic approach to GMO screening: **Duplex or Multiplex PCR for comprehensive GMO screenings. Please check the required filter sets for your RT-PCR machine. Excel® evaluation sheets are available on request.**

5421220001	GMOScreen RT 35S/NOS (IPC)	96 RT-PCR reactions, up to 43 samples per plate. Validated only for use on ABI 7500/7500 Fast, Agilent (Stratagene) MX3005P (MX3000P), Bio-Rad iQ5. Dyes: FAM, Cy5, HEX. Screening in a single tube, and still with an internal positive control (IPC) for inhibition control. All reagents and controls are included.
5421220011	GMOScreen RT 35S/NOS (IPC)	96 RT-PCR reactions, like 5421220001, but with DNAExtractor Clean for 100 extractions included
5421220002	GMOScreen RT 35S/IPC and NOS/IPC (LR)	2 x 96 RT-PCR reactions, for up to 40 samples. For use on low-ROX cyclers with FAM and VIC filters.
5421220003	GMOScreen RT 35S/IPC and NOS/IPC (HR)	2 x 96 RT-PCR reactions, for up to 40 samples. For use on high-ROX cyclers with FAM and VIC filters.
5421210028	GMOScreen LC 35S/NOS	2 x 128 RT-PCR reactions for p35S and tNos detection on LightCycler™ (Roche)
5421223001	GMOScreen RT Rapeseed (IPC)	Kit for a comprehensive real-time PCR screening for GMOs in rapeseed (4 det. systems); 96 RT-PCR rxns Only for Stratagene MX3005P with filters for FAM, HEX, Cal610, Cy5, Atto425
5421229001 NEW!!!	MasterMix RT (LR) Corn/Maize Species	96 rxns for corn/maize species detection (hmgA gene)
5421229101 NEW!!!	MasterMix RT (LR) Soy Species	96 rxns for soy species detection (Ie1 gene)

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GMOScreen Kits for gel-based PCR

The **GMOScreen** product line is designed for a basic approach to GMO testing: The **GMOScreen 35S/NOS** kit screens for most GMO, potential GMO *sources* can be detected with the soy and corn species **PREMasters**, and natural occurrence of the virus **CaMV** (source of the 35S promoter) can be excluded with the **GMOScreen CaMV** kit. **AmpliTaq™ Gold Taq DNA polymerase** (Applied Biosystems) is needed for all **GMOScreen** kits and not included, if not mentioned otherwise. Please enquire.

5221102210	GMOScreen 35S/NOS (DNAExtractor included)	Kit for a general screening for GMO in food/feed: detection of 35S promoter and NOS terminator and plant chloroplast DNA. <i>DNAExtractor</i> kits for 100 extractions, control DNA, premasters for 100 rxns each, gel length marker incl.
5221103510	GMOScreen 35S/NOS	like 5221102210, but without <i>DNAExtractor</i> kit
5221105010	GMOScreen 35S/NOS	like 5221103510, but with Taq DNA polymerase included
5222103610	GMOScreen CaMV	Supplementary kit for Cauliflower Mosaic Virus detection: Premaster (CaMV reverse transcriptase gene) 100 rxns, control plasmid DNA
5222103620	GMOScreen CaMV	like 5222103610 , but with Taq DNA pol. included
5221104410	GMOScreen Rapeseed (DNAExtractor Clean included)	Kit for a comprehensive screening for GMOs in rapeseed samples: detection of NOS terminator, pat(syn) gene, Laurical™ and Roundup Ready™ rapeseed with <i>Brassica</i> control reaction. <i>DNAExtractor Clean</i> kit for 50 samples, control DNAs, premasters for 50 rxns each and length marker for gel electrophoresis included.
5221104409	GMOScreen Rapeseed	like 5221104010, but without <i>DNAExtractor Clean</i> kit
5222604410	PREMaster Soy	Premaster (w/o Taq DNA polymerase) for the detection of soy le1 housekeeping gene, 100 PCR reactions
5222601710	PREMaster Corn	Premaster (w/o Taq DNA polymerase) for the detection of corn hmg A housekeeping gene, 100 PCR reactions

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GMOIdent RT Kits (qualitative real-time PCR)

The **GMOIdent RT** product line enables you to identify and/or exclude single GMO varieties in your sample with real-time PCR on many RT cyclers. The **GMOIdent RT** contain master mixes for 96 rxns each, all reagents for PCR included. Most kits contain an internal positive control (IPC). For DNA extraction, please use the **DNAExtractor Clean** or the **GENESpin** kit. Most kits employ the GMO PCR systems from the official European CRL methods.

5421221001	GMOIdent RT (IPC) Event NK603 Corn	Kit for event-specific detection of NK603 corn with internal positive control
5421221101	GMOIdent RT (IPC) Event MIR604 Corn	Kit for event-specific detection of MIR604 corn with internal positive control
5421221201	GMOIdent RT (IPC) Event DAS-59122-7 Corn	Kit for event-specific detection of Herculex™ RW DAS-59122-7 corn with int. positive control
5421222401	GMOIdent RT (IPC) Event TC1507 Corn	Kit for event-specific detection of Herculex™ I TC1507 corn with int. positive control
5421221501	GMOIdent RT (IPC) Event MON810 Corn	Kit for event-specific detection of MON810 corn with internal positive control
5421221601	GMOIdent RT (IPC) Event MON89034 Corn	Kit for specific detection of MON89034 corn with internal positive control
5421221701	GMOIdent RT (IPC) Event MON863 Corn	Kit for specific detection of MON863 corn with internal positive control
5421221801	GMOIdent RT (IPC) Event MON88017 Corn	Kit for specific detection of MON88017 corn with internal positive control
5421222501	GMOIdent RT (IPC) Event GA21 Corn	Kit for event-specific detection of GA21 corn with internal positive control
5421222301	GMOIdent RT (IPC) RoundupReady™ Soy	Kit for specific detection of RoundupReady™ MON04032- 6 soy with internal positive control
5421221301	GMOIdent RT (IPC) Event A2704-12 Soy	Kit for event-specific detection of LibertyLink™ A2704-12 soy with internal positive control
5421221901	GMOIdent RT (IPC) Event MON89788 Soy	Kit for specific detection of RR2Yield MON89788 soy with internal positive control
5421222001	GMOIdent RT (IPC) Event LL62 Rice	Kit for event-specific detection of LL62 rice with internal positive control
5421222101	GMOIdent RT (IPC) Event LL601 Rice	Kit for event-specific detection of LL601 rice with internal positive control
5221103801	GMOIdent RT LibertyLink™ Rice	Kit for real-time PCR detection (96 rxns) of LL601 and LL62 rice (P35S/bar) in rice samples
5221103811	GMOIdent RT LibertyLink™ Rice (with DNAExtractor Clean)	Kit 5221103801 plus 100 DNA extractions and DNA clean-up
5221103809	GMOIdent RT LibertyLink™ Rice (with species control)	Kit 5221103801 plus rice species control (96 rxns each)
5421221401	GMOIdent RT Bt Rice	Kit for real-time PCR detection (96 rxns) of Bt63 rice in rice samples (method by Mäde et al.)
5421221409	GMOIdent RT Bt Rice (with species control)	5421221401 plus rice species control (96 rxns each)
5421222601	GMOIdent RT (IPC) FP967 Flax	Kit for modification-specific detection of CDC Triffid™ flax/linseed with internal pos. control

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GMIdent Kits (gel-based PCR kits)

The *GMIdent* product line enables you to identify and/or exclude single GMOs in your sample. The *GMIdent* kits are designed for conventional PCR and contain control DNA and premasters for GMO and species testing, Taq DNA polymerase and a length standard for gel electrophoresis. For DNA extraction, choose from the *DNAExtractor* and *GENESpin* kits.

5221102309	<i>GMIdent</i> RoundupReady™ Soy	Kit for modification-specific detection of Roundup Ready™ soy and soy DNA (Ie1) control, 2 x 100 rxns
5221102909	<i>GMIdent</i> Combi Corn	Kit for detection of Bt11/Bt10, Bt176, MON810 and LibertyLink™ / T25 corn, with corn (hmgA) control PCR, 100 rxns each
5221104309	<i>GMIdent</i> Corn Comprehensive	Kit for detection of Bt11/Bt10, event Bt11, Bt176, MON810, LL, T25, MON863, GA21, NK603, TC1507 and DAS-59122-7 corn, 50 reactions each and 100 rxns corn (hmgA) control PCR
5221102409	<i>GMIdent</i> Maximizer™ Bt176 Corn	Kit for modification-specific detection of Bt176 corn with corn DNA (hmgA) control PCR, 2 x 100 rxns
5221102509	<i>GMIdent</i> Bt11/Bt10 Corn	Kit for modification-specific detection of Bt11 and Bt10 corn with corn DNA (hmgA) control PCR, 2 x 100 rxns
5221104109	<i>GMIdent</i> Event Bt11 Corn	Kit for event-specific detection of Bt11 corn with corn DNA (hmgA) control PCR, 2 x 100 rxns
5221102609	<i>GMIdent</i> LibertyLink™ and T25 Corn	Kit for detection of Liberty-Link™ corn and specific det. of T25 corn with corn control PCR, 100 rxns each
5221102709	<i>GMIdent</i> Event MON810 Corn	Kit for event-specific detection of MON810 corn with corn DNA (hmgA) control PCR, 100 rxns each
5221104709	<i>GMIdent</i> MON88017/MON89034 Corn	Kit for modification-specific detection of MON88017 and MON89034 corn w. corn contr. PCR, 2 x 100 rxns
5221104809 NEW!!!	<i>GMIdent</i> Event NK603 Corn	Kit for event-specific detection of NK603 corn with corn control PCR, 2 x 100 rxns
5221104909 NEW!!!	<i>GMIdent</i> Event MON863	Kit for event-specific detection of MON863 corn with corn control, 2 x 100 rxns
5221103009	<i>GMIdent</i> RoundupReady™ GA21 Corn	Kit for modification-specific detection of GA21 corn with corn DNA (hmgA) control PCR, 2 x 100 rxns
5221103209	<i>GMIdent</i> Event TC1507 Corn	Kit for event-specific detection of Herculex™ I TC 1507 corn with corn DNA (hmgA) control PCR, 2 x 100 rxns
5221104209	<i>GMIdent</i> Event DAS-59122-7 Corn	Kit for event-specific detection of Herculex™ Rootworm DAS-59122-7 corn with (hmgA) PCR
5221102809	<i>GMIdent</i> StarLink™ Corn	Kit for specific detection of StarLink™ corn with corn DNA (hmgA) control PCR, 2 x 100 rxns
5221103309	<i>GMIdent</i> Sunup™ Papaya	Kit for modification-specific detection of Sunup™/Rainbow™ papaya with papaya control PCR, 2 x 100 rxns
5221103701	<i>GMIdent</i> Mini-Kit Bt63 Rice	Kit for mod.-specific detection of Bt63 rice (100 rxns cry1Ac/NOS) in rice samples (w/o species control!)
5221105101	<i>GMIdent</i> Mini-Kit FP967 Flax	Kit for mod.-specific detection of CDC Triffid™ flax (100 rxns) (w/o species control!)
5221105201	<i>GMIdent</i> Mini-Kit SeedLink™ Canola	Kit for mod.-specific detection of SeedLink™ rapeseed (100 rxns) (w/o species control!)

Cat #	Item	Description
Control DNAs		
Control DNA for GMO<i>Ident</i> kits		
5211500601	Genomic DNA Roundup Ready™ Soy	(100 copies/μL) 0.15 ml
5211500701	Genomic DNA Maximizer™ Bt176 Corn	(100 copies/μL) 0.15 ml
5211501001	Genomic DNA Bt11 Corn	(100 copies/μL) 0.15 ml
5211500801	Genomic DNA LibertyLink™ T25 Corn	(100 copies/μL) 0.15 ml
5211500901	Genomic DNA YieldGard™ MON810 Corn	(100 copies/μL) 0.15 ml
5211502301	Genomic DNA MaxGard™ MON863 Corn	(100 copies/μL) 0.15 ml
5211501301	Genomic DNA StarLink™ CBH351 Corn	(100 copies/μL) 0.15 ml
5211501201	Genomic DNA Roundup Ready™ GA21 Corn	(100 copies/μL) 0.15 ml
5211504401	Plasmid DNA pGSE539nat (NK603 Corn)	(100 copies/μL) 0.15 ml
5211504701	Plasmid DNA pGSE547nat (Sunup™ Papaya)	(100 copies/μL) 0.15 ml
5211506401	Genomic DNA MIR604 Corn DNA, 10% GMO (from ERM BF-423d)	(100 copies GMO/μL) 0.15 ml
5211507001	Genomic DNA H7-1 sugarbeet 100% GMO (from ERM BF419b)	(100 copies/μL) 0.15 ml
5211501601	Genomic DNA LibertyLink™ Canola	(100 copies/μL) 0.15 ml
5211507101	Genomic DNA Herculex™ I TC 1507 Corn, 10% GMO (from ERM BF418d)	(100 copies GMO/μL) 0.15 ml
5211507201	Genomic DNA Herculex™ RW DAS-591227 Corn, 10% GMO (from ERM BF424b)	(100 copies GMO/μL) 0.15 ml
5211508501	Plasmid DNA pGSE219 (LL62 Rice, CRL method)	(100 copies/μL) 0.15 ml
5211505001	Plasmid DNA pGSE28 (Bt Rice, CRL recommended method)	(100 copies/μL) 0.15 ml
5211505401	Plasmid DNA pGSE220 (LL601 Rice, CRL method)	(100 copies/μL) 0.15 ml
5211501701	Genomic DNA RT73 Canola	(100 copies/μL) 0.15 ml
5211502001	Genomic DNA Laurical™ Canola	(100 copies/μL) 0.15 ml

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GMOQuant Kits

The *GMOQuant* product line is designed for quantitation of GMOs in your sample. There are specific kits and kits for a summarizing quantitation (35S promoter) available. The kits are validated on ABI instruments, but can be used on any realtime PCR cycler equipped with detection devices for the dyes contained in the kits.

All kits contain FAM (reporter dye), ROX (normalizer) (except LightCycler™ kits) and TAMRA (quencher). Many kits are also available with internal positive control (IPC), requiring equipment able to distinguish FAM and VIC. For devices made for single color detection only, we recommend our kits without IPC. Use our external VIC-labelled positive control (#5123202610), if desired. The kits contain ready-to-use mastermixes for species and GMO for 100 reactions each, calibration DNA standards and reference DNA (1% GMO).

With the setup recommended, the kits serve for the following maximum no. of samples:
GMOQuant (also IPC) : quantitative analysis = 18 samples, qualitative analysis = 44 samples

For LightCycler™ (Roche), there are special kits available (see below).
GMOQuant LC: quantitative analysis = 16 samples, qualitative analysis = 48 samples

GMOQuant for LightCycler™

5121200728	GMOQuant (LC) RoundupReady™ Soy	Kit for specific quantitation of RoundupReady™ soy with soy DNA (le1) reference PCR; 2 x 128 reactions
5121200828	GMOQuant (LC) 35S Screen Corn	Kit for a GMO screening quantitation with corn DNA (hmgA) reference PCR; 2 x 128 reactions
5121202028	GMOQuant (LC) Bt11/Bt10 Corn	Kit for quantitation of Bt11/Bt10 corn with corn DNA (hmgA) reference PCR; 2 x 128 reactions
5121205428	GMOQuant (LC) LibertyLink™ Corn	Kit for quantitation of LibertyLink™ corn with corn DNA (hmgA) reference PCR; 2 x 128 reactions
5121203228	GMOQuant (LC) Maximizer™ Bt176 Corn	Kit for specific quantitation of Bt176 corn with corn DNA (hmgA) reference PCR; 2 x 128 reactions
5121203328	GMOQuant (LC) Event MON810 Corn	Kit for event-specific quantitation of YieldGard™ MON810 corn with corn DNA (hmgA) reference PCR; 2 x 128 reactions

Kits with 2 x 64 reactions available on request. Please contact us: kits@genescan.com.

Cat #	Item	Description
GMOQuant (single color) (High ROX®, e.g. for ABI 5700, 7700, 7000, 7900)		
<i>Kits without internal positive control – external positive control available</i>		
5121200410	GMOQuant (HR) RoundupReady™ Soy	Kit for specific quantitation of RoundupReady™ soy with soy DNA (Ie1) reference PCR
5121203110	GMOQuant (HR) 35S Screen Soy	Kit for a GMO screening quantitation with soy DNA (Ie1) reference PCR
5121200610	GMOQuant (HR) 35S Screen Corn	Kit for a GMO screening quantitation with corn DNA (hmgA) reference PCR
5121200510	GMOQuant (HR) Maximizer™ Bt176 Corn	Kit for specific quantitation of Bt176 Maximizer™ corn with corn DNA (hmgA) reference PCR
5121201410	GMOQuant (HR) Bt11/Bt10 Corn	Kit for quantitation of Bt11 and Bt10 corn with corn DNA (hmgA) reference PCR
5121202510	GMOQuant (HR) YieldGard™ Rootworm MON863 Corn	Kit for specific quantitation of MON863 corn with corn DNA (hmgA) reference PCR (weekly cross-reacts with MON88017)
5121201510	GMOQuant (HR) Event MON810 Corn	Kit for event-specific quantitation of YieldGard™ MON810 corn with corn DNA (hmgA) ref. PCR
5121201610	GMOQuant (HR) LibertyLink™ Corn	Kit for quantitation of LibertyLink™ (T14 + T25) corn with corn DNA (hmgA) reference PCR
5121204310	GMOQuant (HR) Event NK603 Corn	Kit for event-specific quantitation of NK603 corn with corn DNA (hmgA) reference PCR
5121204510	GMOQuant (HR) Event GA21 Corn	Kit for event-specific quantitation of GA21 corn with corn DNA (hmgA) reference PCR
5121201810	GMOQuant (HR) StarLink™ Corn	Kit for specific quantitation of StarLink™ corn with corn DNA (hmgA) reference PCR
5121202310	GMOQuant (HR) Event TC1507 Corn	Kit for event-specific quantitation of Herculex™ I TC1507 corn with corn DNA (hmgA) ref. PCR
5121202910	GMOQuant (HR) Event DAS-59122-7 Corn	Kit for event-specific quantitation of Herculex™ RW DAS-59122-7 corn with corn (hmgA) ref. PCR
5121205510	GMOQuant (HR) Event MIR604 Corn	Kit for event-specific quantitation of MIR604 corn with corn DNA (hmgA) reference PCR
5121206210	GMOQuant (HR) Event H7-1 Sugarbeet	Kit for event-specific quantitation of H7-1 sugarbeet with glutamine synthetase sugarbeet reference PCR
5121206310	GMOQuant (HR) Event A2704-12 Soy	Kit for event-specific quantitation of A2704-12 soy with soy DNA (Ie1) reference PCR

Kits with 2 x 50 reactions available on request. Please contact us: kits@genescan.com.

Cat #	Item	Description
GMOQuant IPC (High ROX®, e.g. for ABI 7700, 7900)		
<i>Kits with internal positive control (IPC)</i>		
5121200110	GMOQuant IPC (HR) RoundupReady™ Soy	Kit for specific quantitation of RoundupReady™ soy with soy DNA (le1) reference PCR
5121202110	GMOQuant IPC (HR) 35S Screen Soy	Kit for a GMO screening quantitation with soy DNA (le1) reference PCR
5121200310	GMOQuant IPC (HR) 35S Screen Corn	Kit for a GMO screening quantitation with corn DNA (hmgA) reference PCR
5121200210	GMOQuant IPC (HR) Maximizer™ Bt176 Corn	Kit for specific quantitation of Bt176 Maximizer™ corn with corn DNA (hmgA) reference PCR
5121201010	GMOQuant IPC (HR) Bt11/Bt10 Corn	Kit for quantitation of Bt11 and Bt10 corn with corn DNA (hmgA) reference PCR
5121201110	GMOQuant IPC (HR) Event MON810 Corn	Kit for specific quantitation of YieldGard™ MON810 corn with corn DNA (hmgA) ref. PCR
5121201210	GMOQuant IPC (HR) LibertyLink™ Corn	Kit for quantitation of LibertyLink™ (T14 + T25) corn with corn DNA (hmgA) reference PCR
5121202210	GMOQuant IPC (HR) Event TC 1507 Corn	Kit for specific detection of Herculex™ I TC 1507 corn with corn DNA (hmgA) reference PCR

Kits with 2 x 50 reactions available on request. Please contact us: kits@genescan.com.

GMOQuant UMM (Universal MasterMix)		
5121207510	GMOQuant (UMM) Event DP-305423-1 Soy	Kit for event-specific quantitation of DP305423 soy with soy DNA (le1) reference PCR
5121205810	GMOQuant (UMM) NOS Screen Corn	Kit for a GMO screening quantitation with corn DNA (hmgA) reference PCR

Cat #	Item	Description
GMOQuant IPC (Low ROX®, e.g. for ABI 7500 (Fast), Stratagene MX3005P, MX3000P, Bio-Rad IQ5-Cycler)		
<i>Kits with internal positive control (IPC)</i>		
5121205710	GMOQuant IPC (LR) 35S Screen Corn	Kit for a GMO screening quantitation with corn DNA (hmgA) reference PCR
GMOQuant (Low ROX®, e.g. for ABI 7500 (Fast), Stratagene MX3005P, MX3000P, Bio-Rad IQ5-Cycler)		
<i>Kits without internal positive control (IPC)</i>		
5121203510	GMOQuant (LR) 35S Screen Corn	Kit for a GMO screening quantitation with corn DNA (hmgA) reference PCR
5121207210	GMOQuant (HR) 35S Screen Soy	Kit for a GMO screening quantitation with soy DNA (le1) reference PCR
5121203410	GMOQuant (LR) RoundupReady™ Soy	Kit for specific quantitation of RoundupReady™ soy with soy DNA (le1) reference PCR
5121206810	GMOQuant (LR) Event A2704-12 Soy	Kit for event-specific quantitation of LibertyLink™ A2704-12 soy with soy DNA (le1) reference PCR
5121207510	GMOQuant (UMM) Event DP-305423-1 Soy	Kit for event-specific quantitation of DP305423 soy with soy DNA (le1) reference PCR
5121204410	GMOQuant (LR) Event NK603 Corn	Kit for quantitation of NK603 corn with corn DNA (hmgA) reference PCR
5121204610	GMOQuant (LR) Event GA21 Corn	Kit for specific detection of GA21 corn with corn DNA (hmgA) reference PCR
5121206410	GMOQuant (LR) Event MIR604 Corn	Kit for specific detection of MIR604 corn with corn DNA (hmgA) reference PCR
5121207310	GMOQuant (LR) Event MON88017 Corn	Kit for event-specific detection of MON88017 corn with corn DNA (hmgA) reference PCR
5121206710	GMOQuant (LR) Event MON89034 Corn	Kit for event-specific detection of MON89034 corn with corn DNA (hmgA) reference PCR
5121207610	GMOQuant (LR) Event 3272 Corn	Kit for event-specific detection of 3272 corn with corn DNA (hmgA) reference PCR

Kits with 2 x 50 reactions available on request. Please contact us: kits@genescan.com.

More GMOQuant Kits for real-time PCR machines working with a low ROX level available soon, please enquire.

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DNAnimal Kits

The *DNAnimal* product line enables you to identify, differentiate and/or quantify animal species in your sample.

For most convenient species testing, use our new real-time kits for direct identification: *DNAnimal Ident*. The kits with 100 reactions can be used for 22 samples on one plate for high ROX® AND low ROX® cyclers.

The *DNAnimal BOSQuant* kit is available as realtime kit for most realtime cyclers and as special kit for LightCycler™ (Roche). These kits contain ready-to-use mastermixes, calibration standards and a 1% reference DNA.

5422210010	<i>DNAnimal Ident Meat</i> for identification of bovine and porcine DNA	2x50 reactions, all reagents and positive control DNA included
5422210110	<i>DNAnimal Ident Poultry</i> for ident. of chicken, duck and turkey DNA	3x50 reactions, all reagents and positive control DNA included
5422210210	<i>DNAnimal Ident Beef</i> for identification of bovine DNA	100 reactions, all reagents and positive control DNA included
5422210310	<i>DNAnimal Ident Pork</i> for identification of porcine DNA	100 reactions, all reagents and positive control DNA included
5422210410	<i>DNAnimal Ident Lamb</i> for identification of sheep DNA	100 reactions, all reagents and positive control DNA included
5422210510	<i>DNAnimal Ident Goat</i> for identification of goat DNA	100 reactions, all reagents and positive control DNA included
5422210610	<i>DNAnimal Ident Chicken</i> for identification of chicken DNA	100 reactions, all reagents and positive control DNA included
5422210710	<i>DNAnimal Ident Turkey</i> for identification of turkey DNA	100 reactions, all reagents and positive control DNA included
5422210810	<i>DNAnimal Ident Duck</i> for identification of duck DNA	100 reactions, all reagents and positive control DNA included
5422211010	<i>DNAnimal Ident Fish</i> for identification of fish DNA	100 reactions, all reagents and positive control DNA included

Quantitative Kits

5122210110	<i>DNAnimal BOSQuant (HR)</i> for quantitation of bovine DNA (high ROX®)	100 reactions each for bovine and animal test, reference DNA incl.
5122210210	<i>DNAnimal BOSQuant (LC)</i> for quantitation of bovine DNA on the LightCycler™ (Roche)	100 reactions each for bovine and animal test, reference DNA included

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DNA^{Animal} Control DNAs

Control DNAs for DNA^{Animal} – only in combination with a kit.

DNAs of chicken, cattle, pig, sheep and turkey included in every DNA^{Animal} Consensus Kit.

5222580804	Genomic DNA Cat (<i>Felis silvestris</i>)	0.2 ml [1 ng/μl]
5222581304	Genomic DNA Cattle (<i>Bos taurus</i>)	0.2 ml [1 ng/μl]
5222580504	Genomic DNA Chicken (<i>Gallus gallus</i>)	0.2 ml [1 ng/μl]
5222580604	Genomic DNA Dog (<i>Canis lupus familiaris</i>)	0.2 ml [1 ng/μl]
5222580104	Genomic DNA Muscovy Duck (<i>Cairina moschata</i>)	0.2 ml [1 ng/μl]
5222582304	Genomic DNA Mallard Duck (<i>Anas platyrhynchos</i>)	0.2 ml [1 ng/μl]
5222580404	Genomic DNA Fallow Deer (<i>Dama dama</i>)	0.2 ml [1 ng/μl]
5222581804	Genomic DNA Goat (<i>Capra hircus</i>)	0.2 ml [1 ng/μl]
5222580204	Genomic DNA Goose (<i>Anser cygnoides</i>)	0.2 ml [1 ng/μl]
5222580304	Genomic DNA Hare (<i>Lepus europaeus</i>)	0.2 ml [1 ng/μl]
5222581004	Genomic DNA Horse (<i>Equus caballus</i>)	0.2 ml [1 ng/μl]
5222580904	Genomic DNA Human (<i>Homo sapiens</i>)	0.2 ml [1 ng/μl]
5222582004	Genomic DNA Kangaroo (<i>Macropus giganteus</i>)	0.2 ml [1 ng/μl]
5222582104	Genomic DNA Ostrich (<i>Struthio camelus</i>)	0.2 ml [1 ng/μl]
5222581504	Genomic DNA Pig (<i>Sus scrofa domestica</i>)	0.2 ml [1 ng/μl]
5222580704	Genomic DNA Rabbit (<i>Oryctolagus cuniculus</i>)	0.2 ml [1 ng/μl]
5222581904	Genomic DNA Red Deer (<i>Cervus elaphus</i>)	0.2 ml [1 ng/μl]
5222581204	Genomic DNA Roe Deer (<i>Capreolus capreolus capreolus</i>)	0.2 ml [1 ng/μl]
5222582204	Genomic DNA Sika Deer (<i>Cervus nippon</i>)	0.2 ml [1 ng/μl]
5222581404	Genomic DNA Sheep (<i>Ovis aries</i>)	0.2 ml [1 ng/μl]
5222581604	Genomic DNA Springbok (<i>Antidorcas marsupialis</i>)	0.2 ml [1 ng/μl]
5222581104	Genomic DNA Turkey (<i>Melagris gallopavo</i>)	0.2 ml [1 ng/μl]
5222580004	Genomic DNA Water Buffalo (<i>Bubalus bubalis</i>)	0.2 ml [1 ng/μl]
5222581704	Genomic DNA Wild Boar (<i>Sus scrofa scrofa</i>)	0.2 ml [1 ng/μl]
5212581501	Genomic DNA Domestic Pig (<i>Sus scrofa domestica</i>)	150 μL [100 copies/μl]
5212581301	Genomic DNA Cattle (<i>Bos taurus</i>)	150 μL [100 copies/μl]
5212580501	Genomic DNA Chicken (<i>Gallus gallus</i>)	150 μL [100 copies/μl]
5222582301	Genomic DNA Mallard Duck (<i>Anas platyrhynchos</i>)	150 μL [100 copies/μl]
5212581101	Genomic DNA Turkey (<i>Melagris gallopavo</i>)	150 μL [100 copies/μl]
5212581801	Genomic DNA Goat (<i>Capra hircus</i>)	150 μL [100 copies/μl]
5212581401	Genomic DNA Sheep (<i>Ovis aries</i>)	150 μL [100 copies/μl]

Cat #	Item	Description
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BACGene Kits

The BACGene product line is designed for identification of food pathogens. The kits are validated for a pharmaceutical application and are made for research use only. The kits can be used on any realtime PCR cycler equipped with detection devices for the dyes in the kits. The kits contain ready-to-use mastermixes for 100 reactions. All kits contain FAM (reporter dye), ROX (normalizer) and TAMRA (quencher). Most kits are also available with internal positive control, requiring equipment able to distinguish FAM and VIC. For devices made for single color detection only, we recommend our kits without IPC. Use our external VIC-labelled positive control (#5123202610), if desired.

BACGene IPC (High ROX® – e.g. for ABI 7700)

Kits with internal positive control (IPC)

5123201810	BACGene IPC (HR) Salmonella ssp.	Mastermix for 100 PCR reactions for specific detection of <i>Salmonella ssp.</i>
5123201910	BACGene IPC (HR) Escherichia coli	Mastermix for 100 PCR reactions for specific detection of <i>Escherichia coli</i>
5123202010	BACGene IPC (HR) Pseudomonas aeruginosa	Mastermix for 100 PCR reactions for specific detection of <i>Pseudomonas aeruginosa</i>
5123202110	BACGene IPC (HR) Staphylococcus aureus	Mastermix for 100 PCR reactions for specific detection of <i>Staphylococcus aureus</i>

BACGene (High ROX® – e.g. for ABI 7700 or ABI 5700)

Kits without internal positive control – external positive control available

5123202210	BACGene (HR) Salmonella ssp.	Mastermix for 100 PCR reactions for specific detection of <i>Salmonella ssp.</i>
5123202310	BACGene (HR) Escherichia coli	Mastermix for 100 PCR reactions for specific detection of <i>Escherichia coli</i>
5123202410	BACGene (HR) Pseudomonas aeruginosa	Mastermix for 100 PCR reactions for specific detection of <i>Pseudomonas aeruginosa</i>
5123202510	BACGene (HR) Staphylococcus aureus	Mastermix for 100 PCR reactions for specific detection of <i>Staphylococcus aureus</i>
5123202610	Exogenous Positive Control (EPC)	100 reactions ready –to-use positive control master mix (including DNA Taq polymerase)

Cat #	Item	Description
BACGene (Low ROX® – e.g. for ABI 7500 or Stratagene MX 3005P)		
<i>Kits without internal positive control</i>		
5123212210	BACGene (LR) <i>Salmonella ssp.</i>	Mastermix for 100 PCR reactions for specific detection of <i>Salmonella ssp.</i>
5123212310	BACGene (LR) <i>Escherichia coli</i>	Mastermix for 100 PCR reactions for specific detection of <i>Escherichia coli</i>
5123212410	BACGene (LR) <i>Pseudomonas aeruginosa</i>	Mastermix for 100 PCR reactions for specific detection of <i>Pseudomonas aeruginosa</i>
5123212510	BACGene (LR) <i>Staphylococcus aureus</i>	Mastermix for 100 PCR reactions for specific detection of <i>Staphylococcus aureus</i>

Contact

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Terms and Conditions

- Products are sold by Eurofins GeneScan GmbH, a company of GeneScan Europe AG, member of the Eurofins Group.
- All sales are subject to the attached Standard Terms and Conditions of Eurofins GeneScan GmbH.
- Valid starting from January 1st, 2010. Terms and Conditions and prices of previous price lists expire.
- Delivery on buyer's expense and risk, EXW Freiburg Incoterms 2000, prepaid and added, unless ordered differently by customer.
- Prices are subject to change.
- Refunds and Credits are not provided on unused or expired kits.
- GMOQuant and DNAnimal BOSQuant products: The Taqman® process is covered by patents and patent applications issued to Hoffmann-La Roche AG and applicable in certain countries. GeneScan does not encourage or support the unauthorized or unlicensed use of these processes. Use of these products is recommended for persons that either have a license to perform PCR or are not required to obtain a license.
- SeedLink™, LibertyLink™, StarLink™, Maximizer™, RoundupReady™, YieldGard™, Herculex™: These are trademarks of Bayer CropScience, Syngenta, Monsanto and Dow AgroScience.

Standard Terms and Conditions of Eurofins GeneScan GmbH

I. Area of Application

These Standard Terms and Conditions apply to all current and future offers made by, and agreements concluded with, EUROFINS GENESCAN GMBH (hereinafter "EFG"). The Customer's general terms and conditions shall not apply.

II. Placement of Order

EFG's offers are non-binding. Contracts shall only come into effect by way of our written order confirmation or by way of delivery. The subject matter of the contract, and in particular the scope of the order, shall be determined solely by EFG's order confirmation.

EFG reserves all rights of ownership and copyright over its illustrations, drawings, calculations and other documents; their disclosure to third parties requires the express written consent of EFG. EFG reserves the right to subcontract analyses to other qualified laboratories.

III. Prices and Payment Conditions

Provided nothing has been agreed to the contrary, EFG's prices apply 'ex works' excluding packaging which is charged separately in the invoice. EFG's prices do not include the statutory value-added tax.

EFG reserves the right to increase the prices appropriately if substantial unforeseen cost increases occur after the agreement is signed, particularly as the result of collective bargaining agreements or increases in the cost of personnel and material. In case of a more than insubstantial increase in price the Customer may rescind the agreement.

EFG is entitled to charge up to 30 % of the agreed price on placement of the order. This amount is due immediately without deductions upon receipt of the order confirmation.

The Customer is only entitled to a set-off in respect of rights which have been upheld by declaratory judgement, are uncontested or recognised by EFG.

IV. Delivery of Samples or Materials

EFG shall be entitled to examine the samples or materials provided by the Customer as to their suitability for analysis or production. The Customer shall bear the costs of such examination if the samples or materials do not comply with the required standard of quality. Where initial examination reveals that analysis or production is not possible, or would be very difficult – particularly as a result of the samples or materials becoming infiltrated or degraded by foreign materials – EFG shall be entitled to rescind the contract. The Customer shall bear any costs already incurred by Contractor.

The Customer shall be under a duty to provide EFG with information as to the composition and condition (esp. pre-treatment, and/or additives) of the samples or materials which it has supplied. If the Customer fails to comply with this obligation within a reasonable time as set by EFG, EFG may rescind the contract and request compensation of its expenses.

If the samples or materials possess properties or contain substances which were not reported by the Customer, EFG shall be entitled to charge the Customer for any resulting additional costs or to rescind the contract in return for reimbursement of the costs so far incurred.

Samples sent in by the Customer or samples taken by EFG shall become the property of EFG insofar as they are necessary for the purposes of fulfilling the contract. EFG may either return or dispose of unused sample material at the Customer's expense. Any costs incurred in connection therewith

(transport/insurance/disposal etc.) shall be borne by the Customer.

V. Special Duties of Customer with Regard to Nucleic Acids

If the products or analyses supplied by EFG contain nucleic acid sequences or information which is the intellectual property of

EFG, the disclosure or utilisation of any information provided by EFG requires the express and written consent of EFG which may be revoked at any time.

Products based on the intellectual property of EFG may not be copied, produced or reproduced without EFG's written consent.

In the event of a culpable breach of these duties, the Customer shall pay lump sum damages amounting to 10 % of the gross order value. Both parties retain the right to show that a higher or lower level of loss has been incurred.

VI. Delivery and Acceptance

Delivery periods shall not commence until all technical questions have been clarified and the appropriate samples have been delivered on time.

Delays in the delivery of products and services arising due to force majeure and events which substantially impede or prevent delivery by EFG, and for which EFG is not responsible, shall entitle EFG to postpone delivery for the duration of such events plus an appropriate start-up period, or to cancel the as yet unfulfilled part of the contract, in whole or in part. If the events obstructing performance continue for longer than three months, the Customer shall be entitled to cancel the as yet unfulfilled part of the contract, after an appropriate extension of time has expired. EFG may only invoke the said circumstances provided that it informs the Customer promptly.

EFG is entitled to make partial deliveries and to perform partial services at any time provided this is reasonable for the Customer.

VII. Passing of Risk

The risk of accidental destruction or damage shall pass to the Customer as soon as the subject matter of the contract has been given over for transport or readiness for transport has been notified. This shall apply irrespective of whether dispatch takes place from the place of

performance and of who is to bear the cost for transport.

VIII. Warranty Claims

If the goods or services supplied by EFG prove to be defective, the Customer's rights to claim under warranty shall be governed by the statutory provisions, subject to the proviso that the Customer may initially only claim subsequent performance. EFG shall either replace the defective goods or carry out repairs, as it thinks fit. Where the complaint is justified, EFG shall be obliged to bear the cost of work and materials necessary for correcting the defect, provided such costs are not increased by transferring the goods to a location other than the place of performance.

In the event that subsequent performance fails, then, without prior extension of time, the Customer shall be entitled to a reduction in the purchase price or, in the case of not insubstantial defects, may rescind the contract. In addition, the Customer may claim damages in accordance with Clause X.

The warranty period shall be twelve months as from the date on which risk passes or from the date of acceptance. Damages claims under Clause X shall remain unaffected.

IX. Analyses and Orders for Expert Reports

The Customer is aware of the fact that some analyses may be impossible for reasons which are beyond EFG's control. No liability for success can therefore be accepted. The same applies to subcontractors where subcontracts are granted.

If the Customer raises an objection to a test result reported by EFG, the result shall be reviewed by EFG or by a third party on EFG's behalf. If the result, subject to the objection, is confirmed, the Customer shall bear the costs of the repeat testing. Otherwise, the test result shall be corrected free of charge.

A repeat test can only be performed if the condition of the sample, or goods to be sampled, make such retesting possible.

The Customer is required to indemnify EFG against any compensation claims by third parties in the event of any further use of expert reports, test certificates or reports.

X. Liability

EFG shall be liable in accordance with statutory provisions for any culpable breach of fundamental contractual obligations. However, provided that EFG has not acted intentionally or with gross negligence, it shall only be liable for foreseeable damage and loss which typically occur in such cases.

As regards all other breaches of duty, EFG shall only be liable where damage is caused by one of its statutory representatives or agents acting intentionally or with gross negligence.

In the case of a guarantee and for damages in respect of death, physical injury or damage to health, EFG shall be liable in accordance with the statutory provisions.

Liability under the Product Liability Act remains unaffected.

Otherwise, damages claims against EFG arising from breaches of duty are excluded.

XI. Reservation of Title

EFG reserves title to the delivered goods until all outstanding balances arising out of the business relationship with the Customer have been settled.

Provided the Customer has not defaulted on payment, it shall be entitled to dispose of the goods, subject to the reservation of title, in the ordinary course of business. By way of security, the Customer hereby assigns to EFG any claims arising from the resale or based on other legal grounds (insurance, tort etc.). If the goods subject to the reservation of title are sold with other goods at an all round price, the assignment shall be limited to the proportionate amount of EFG's invoice (including value added tax) which relates to the said reserved goods. Provided the Customer duly complies with its obligations arising out of the business relationship with EFG, it shall be entitled to call in the claims which it has assigned

to EFG. On request, the Customer shall disclose the assignment and provide EFG with the information required in order to call in the claims.

If the realisable value of the security granted to EFG exceeds EFG's claims by more than 10 %, EFG shall be obliged to release the securities, in the amount of the excess, in the order that it thinks fit.

XII. Duty of Confidentiality

The Customer is required to maintain the confidentiality of all services provided by EFG and their results as well as the composition of the products delivered by EFG.

Expert reports, test reports and other reports may only be disclosed, published or reproduced, in whole, in part or in summary, with the consent of EFG.

XIII. Written Form

Amendments and additions as well as ancillary agreements require written confirmation by EFG.

XIV. Jurisdiction, Application of German Law

The place of performance for the mutual obligations arising out of the contractual relationship is Freiburg i. Br. The place of jurisdiction for all disputes arising in connection with this contract shall be Freiburg i. Br. EFG is however also entitled to bring an action against the Customer at its corporate domicile or personal place of residence, if it so chooses, or to refer the dispute to a tribunal appointed in accordance with the Settlement and Arbitration Regulations of the International Chamber of Commerce (ICC), for a final decision.

German Law shall apply.

XV. Severance Clause

In the event that individual provisions of these conditions or the rest of the agreement, prove to be invalid this shall not affect the validity of the other provisions. Provided that non-mandatory law does not apply, the invalid provision shall be replaced by a provision which comes closest in its economic content to the invalid provision. The same applies in the event of omissions.