

PCR kits for GMO detection

Transgenic crop/Event	Transgenes	Amplicon size (bp)	Catalog no:
Cotton			
Bollgard (Mon 531)	Cry1Ac	228	AID 101
Bollgard II (MON 15985)	Cry1Ac, Cry2A	228/260	AID 102
WideStrike	Cry1F, Cry1Ac	300/228	AID 103
MON 88913 (RoundUP Ready)	CP4EPSP	506	AID 104
MON 1445 (RoundUp Ready)	CP4EPSP	506	AID 105
RoundUp Ready Flex	CP4EPSP	506	AID 106
Brinjal			
For insect resistance	Cry1Ac	475	AID 107
For insect resistance	Cry1Ab	620	AID 108
Soybean			
RoundUp Ready Soyabean	CP4EPSP	441	AID 100
Maize			
MON 810	Cry1Ab	170	AID 111
RoundUp Ready Maize	CP4EPSPS	441	AID 112
Tomato			
For drought and salt tolerance	Osmotin	418	AID 113
For drought and salt tolerance	Avp1-F/R	451	AID 114
Cauliflower			
For insect tolerance	Cry1Ac 1	219	AID 115
Mustard			
For male sterility	Barnase, barstar	300/352	AID 116
Rice			
For insect resistance	Cry1Ac	295	AID 117
Okra			
For insect resistance	Cry1Ac	391	AID 118
Potato			
For insect resistance	Cry1Ab	620	AID 119
For better nutritional quality	AmA1-171 F/R	171	AID 120
For late blight resistance	RB	375	AID 121
Promoter and Marker Genes			
Promoter	35S	196	AID 122
Terminator	NOS	180	AID 123
Antibiotic marker	NPTII	508	AID 124
Endogenous genes			
Cotton	Sad1	107	AID 125
Brinjal	Pomtom F/R	141	AID 126
Soybean	Lectin	178	AID 127
Maize	Zein	329	AID 128
Tomato	Lat 52	92	AID 129
Tomato	PomTom	143	AID 130
Cauliflower	SRK	311	AID 131
Mustard	HMG1/Y	99	AID 132
Rice	α -tubulin	295	AID 133
Potato	UGP	88	AID 134
Okra	Chloroplast-tRNA gene	595	AID 135

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Amar Immunodiagnostics offers three types of qualitative kits for PCR based GMO testing.

GMO screening kits

Trait/event specific gene Identification kits.

Endogenous gene Detection kits

1. **GMO screening kits:** Most transgenic plants have 35S as promoter and NOS as terminator gene. The presence of either/both of these genes in plant indicates that the plant being tested has been genetically modified and hence is a GMO
2. **Trait/event-specific Gene Identification kit:** The plant which tests positive in GMO screening kit can be further tested to establish the identity of trait/event specific gene by trait/event specific PCR testing kit to identify the nature of transgene present in the plant.
3. **Endogenous gene:** In order to ensure that the DNA purified from the plant tissue is of acceptable quality and does not contain PCR inhibitors, we provide PCR kits to detect plant specific gene.

Kit size: PCR kits are provided in 50 reactions format.

Kit contents:

1. Master Mix
2. Taq polymerase
3. H₂O

Prototype PCR Amplification Program

Step	Temperature/ Time
Initial denaturation	94°C/5min
Cyclic Amplification	
Denaturation	94°C/30sec
Primer Annealing	59°C/60 sec
Extension	72°C/60 sec
Number of cycles	39 cycles
Final elongation	72°C/8min

The presence or absence of amplicons generated by PCR reaction is verified by Agarose gelelectrophoresis

* Positive and negative calibrators are separately available. **Store at -20C**