

# GMO SCREENING KIT PLUS Real Time

## Real Time PCR GMO Detection Kit

### Real time PCR GMO Detection Kit for *bar*, *ctp2-CP4epsps* and *P35S-pat*

Product code: IC-02-2021 (50 tests) / IC-02-2023 (100 tests)

#### Brief description

**GMO Screening Kit PLUS Real-Time** provides reagents for the qualitative detection of *bar* gene (*phosphinothricin N-acetyltransferase* gene from *Streptomyces hygrosopicus*), of the construct containing *ctp2-CP4epsps* (junction point of chloroplast-transitpeptide from *Arabidopsis thaliana* and *epsps* gene from *Agrobacterium tumefaciens CP4*) and of the *P35S-pat* DNA sequence (junction point from P-35S promoter of CaMV and *pat* gene from *Streptomyces viridochromogenes*) in DNA obtained from fresh and processed samples for human and animal use (see Fig.1) and different samples from which a DNA extraction is possible, by means of PCR Real time.

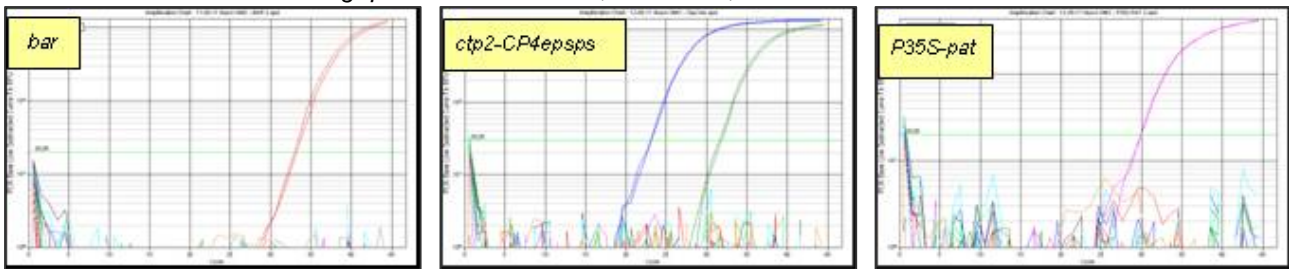
**GMO Screening Kit PLUS Real-Time** has been created to complete the information obtained from the use of **GMO Screening kit PCR Real time kit** for the qualitative detection of 35S promoter and NOS terminator.

The system has derived from **JRC Reference Report** (*Compendium of reference methods for GMO analysis*).

#### GMO Screening Kit PLUS Real-Time took part in following PROFICIENCY TESTS:

DLA –21/2011 “GMO Screening qualitative: **MAIZE and SOYA on PASTRIES, CEREAL PRODUCTS, DIETETIC POWDER**”

DLA – 23/2011 “GMO Screening qualitative: **FLAX SEED, RAPE SEED, MUSTARD PRODUCTS on SEEDS and SPICE POWDER**”



- Maize Bt 176 – 1% (contains *bar* gene)
- Soybean GTS 40-3-2 (RR) – 1%
- Maize GA21 – 1%
- Sugarbeet H7-1 – 100% (contains *ctp2-CP4epsps*)
- Maize MON810 – 10%
- Potato EH92-527-1 – 100%
- Maize Bt11 – 1% (contains *P35S-pat*)
- Maize NK603 – 1% (contains *ctp2-CP4epsps*)

**Figure 1:** log-scale visualizations for the detection of *bar*, *ctp2-CP4epsps* and *P35S-pat* in several OGMs.

#### Technical features

<b>Number of test</b>	50/100 reactions
<b>Kit content</b>	Mix Test <i>bar</i> - Mix Test <i>ctp2-CP4epsps</i> – Mix Test <i>P35S-pat</i> – DNA positive control – sterile H <sub>2</sub> O DNase free
<b>Specificity</b>	the amplification checks for <i>bar</i> , <i>ctp2-CP4epsps</i> and <i>P35S-pat</i> have been verified on OGM varieties containing combinations of target sequences.
<b>Sensitivity</b>	the LOD for the <i>bar</i> and <i>ctp2-CP4epsps</i> is equal to 5 copies of target DNA the LOD for the <i>P35S-pat</i> is equal to 10 copies of target DNA
<b>Detection limit</b>	up to 0.02% of transgenic DNA extracted from samples derived from the mixing of IRMM standards.
<b>Detection</b>	probe labelled with fluorescent dyes (Taqman®) - FAM
<b>Results interpretation</b>	available an excel datasheet comprising more than 81 GMO events verified for 5 different targets: 35S, NOS, <i>bar</i> , <i>ctp2-CP4epsps</i> and <i>P35S-pat</i> , to facilitate the data interpretations and to reduce the number of GMO events to be detected after an initial screening.