Pros: low cost.
Cons: RE availability, cross-hybridization, insertion site unknown.

Single TE family resolution (low copy number).

(a) Southern blot

(b) PCR-based methods

(c) Whole-genome sequencing

Pros: medium cost, high specificity, exact insertion site available (sequencing), bigger fragments may be sequenced.
Cons: dependent on known TE sequences.

Single TE family resolution (if using sequencing methods for detection, then high copy numbers can be assayed).

Pros: genome-wide information available.
Cons: high price if many strains tested, small reads hard to map and to infer TE subfamilies, exact insertion site not always known to use (depends on coverage).

Genome-wide resolution.
Genomic DNA digestion

Strains

RE digestion

Electrophoresis

Radiolabeled TE probe

Autoradiogram

TEV

Fixed TE

Southern blot

(a)

Genomic DNA digestion

Adaptor ligation

PCR-based methods

(b)

Genomic DNA

DNA shearing

Whole-genome sequencing

(c)

High-throughput

Low-throughput

Sequencing

Mapping

(computational analysis)

TE Copy absent from the reference

Copy present in the reference

Mate unmapped

Pros: low cost.
Cons: RE availability, cross-hybridization, insertion site unknown.
Single TE family resolution (low copy number).

Pros: genome-wide information available.
Cons: high price if many strains tested, small reads hard to map and to infer TE subfamilies, exact insertion site not always known to use (depends on coverage).
Genome-wide resolution.

Pros: medium cost, high specificity, exact insertion site available (sequencing), bigger fragments may be sequenced.
Cons: dependent on known TE sequences.
Single TE family resolution (if using sequencing methods for detection, then high copy numbers can be assayed).

PCR amplification