

# TaqMan Assays for every kind of research

## Comprehensive, high-quality solutions for genetic analysis

Applied Biosystems™ TaqMan® Assays are the industry-leading choice for 5′ nuclease real-time PCR (qPCR) assays. They are cited in more publications than any other qPCR assay product and are considered the gold standard for quantitative genomic analysis. Backed by a performance guarantee,\* TaqMan Assays are consistently chosen as a proven solution to reliably provide fast and accurate results.

- **Specificity**—advanced primer/probe sequence selection criteria plus minor groove binder (MGB) probe enhancement deliver the specificity and reproducibility you need for confidence in your results; your results are generated from amplification of the intended target, not from nonspecific dye binding or amplification of closely related genes or pseudogenes
- **Sensitivity**—the nonfluorescent quencher (NFQ) on Applied Biosystems™ TaqMan® probes minimizes background, and intelligent PCR primer and probe design maximizes amplification efficiency; get better sensitivity and accuracy to reliably detect targets present at 10 or fewer copies
- **Reproducibility**—accurately reproduce results from well to well, day to day, and lab to lab, even across manufacturing lots
- **Proven technology**—backed by over 40,000 publications to date



### Guaranteed to perform for all of your research needs\*

TaqMan Assays cover a broad range of research for a wide variety of applications:

Expression	Genetic variation
Gene expression	Single-nucleotide polymorphism (SNP) genotyping
microRNA expression	Drug metabolism enzyme genotyping
Long noncoding RNA (lncRNA) expression	Copy number variation (CNV)
Fusion transcript detection	Rare somatic mutation detection
Protein expression	

### TaqMan Gene Expression Assays

- Designed to detect virtually any gene product, with more than 2 million predesigned assays; we offer custom-design assay tools to detect any gene product not covered by our predesigned assays
- Best-coverage assays available to detect the highest number of transcript variants possible
- Available for 29 species and some microbial pathogens
- Flexible formats—single tubes, 96-well plates, 384-well plates, microfluidic cards, and Applied Biosystems™ OpenArray™ plates

## TaqMan Advanced miRNA Assays

- One universal reverse transcription (RT) step for all Applied Biosystems™ TaqMan® Advanced miRNA Assays
- Detect targets with as few as 60 copies of input microRNA (miRNA) in the cDNA synthesis reaction
- Detect only mature miRNA and distinguish related highly homologous miRNAs with gold-standard TaqMan probe specificity
- Detect and quantify mature miRNA from as little as 1 pg of total RNA or 2 µL of purified plasma or serum
- Compatible with tissue and biofluids including serum and plasma

## TaqMan Noncoding RNA Assays

- For reliable detection and quantitation of noncoding transcripts longer than 200 nucleotides
- Designed to only detect noncoding transcript targets

## TaqMan Fusion Assays

- Quantify expression level of gene fusions using qPCR
- Orthogonal validation method for confirming next-generation sequencing (NGS) results

## TaqMan SNP Genotyping Assays

- Comprise the world's largest predesigned collection with over 17 million assays
- Rigorous design pipeline with >90 parameters for optimal primer–probe combinations
- Functional quality testing on at least 20 gDNA samples for each assay
- Flexible formats to accommodate any number of targets and samples

## TaqMan Drug Metabolism Genotyping Assays

- Detect polymorphisms in high-value drug metabolism enzyme (DME) pharmacogenetics markers
- Cover specific SNP alleles, multi-nucleotide polymorphisms (MNPs), and insertions and deletions (indels)
- Targets derived from public databases, consortiums, and published articles

## TaqMan Copy Number Assays

- Evaluate copy number of genomic DNA targets
- Easy to interpret—Applied Biosystems™ CopyCaller™ Software provides the calculated copy number and predicted copy number, along with confidence value and z-score quality metrics
- Fast and simple—setup to primary analysis in 3–4 hours

## Custom TaqMan probes

Design your own TaqMan primers and probes with the option of choosing from dual-labeled TaqMan MGB, TAMRA, or QSY custom probes. TaqMan MGB probes include an MGB moiety at the 3' end that increases the melting temperature ( $T_m$ ) of the probe and stabilizes probe–target hybrids. TaqMan MGB probes can be significantly shorter than traditional probes, providing better sequence discrimination and flexibility to accommodate more targets. TaqMan QSY probes are available for multiplexing three or more targets and are available with dyes optimized to work with Applied Biosystems™ QuantStudio™ qPCR systems.

## TaqMan Mutation Detection Assays

- Powered by competitive allele-specific TaqMan® PCR (castPCR™) technology
- Detect and measure somatic mutations in genes associated with cancer research
- Detect rare amounts of mutated DNA in a sample that contains large amounts of normal, wild-type DNA
- Compatible with different sample types, such as cell lines; formalin-fixed, paraffin-embedded (FFPE) tissue; and fresh frozen tissue samples

\* Terms and conditions apply. See full details of the guarantee at [thermofisher.com/taqmanwarranty](http://thermofisher.com/taqmanwarranty).

Find out more at [thermofisher.com/taqman](http://thermofisher.com/taqman)

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