PrimePCR Assays and Panels
Publications List

Biochemistry

Cavallero A et al. (2022).
Presence, enzymatic activity, and subcellular localization of paraoxonases 1, 2, and 3 in human lung tissues.
Life Sci 311, 121147.
Paraoxonases (PON1, PON2, PON3) were identified in lung tissues. PrimePCR Assays were used to evaluate oxidative stress gene expression in respiratory health.

Cancer Biology

Narasimhan H et al. (2022).
Tumor necrosis factor-α (TNFα) stimulates triple-negative breast cancer stem cells to promote intratumoral invasion and neovasculogenesis in the liver of a xenograft model.
Biology (Basel) 11, 1481.
TNF-α role in breast cancer stem cell invasion was explored. PrimePCR Assays were used to profile TNF pathway genes in tumor microenvironments.

Cell Biology

Sokołowska P et al. (2024).
Endoplasmic reticulum stress differently modulates the release of IL-6 and IL-8 cytokines in human glial cells.
Int J Mol Sci 25, 8687.
Endoplasmic reticulum stress and cytokine release were examined in glial cells. PrimePCR Assays were used to profile unfolded protein response and inflammation markers.

Environmental Health

Sokołowska G (2025).
Toxicological studies of fungicides frequently detected in drinking water using in vitro biological models.
Desalination and Water Treatment 321, 100997.
Fungicide toxicity in drinking water was assessed. PrimePCR Assays were used to measure expression of stress response and detoxification genes.

BIO-RAD

Immunology

Best LG et al. (2021).
Unactivated leukocyte expression of C-reactive protein is minimal and not dependent on rs1205 genotype.
Sci Rep 11, 5691.
C-reactive protein (CRP) is a biomarker used to assess inflammatory status in cardiovascular disease and other conditions. PrimePCR Quantitative PCR (qPCR) and Droplet Digital™ PCR (ddPCR™) Assays were employed to detect gene expression of CRP in leukocytes.

Laumann M et al. (2024).
Senescence-like phenotype after chronic exposure to isoproterenol in primary quiescent immune cells.
Biomolecules 14, 1528.
Cellular senescence in immune cells was examined. PrimePCR Assays were used to quantify senescence markers (p16, p21, p53) in immune aging studies.

Morandini L et al. (2024).
Adoptive transfer of immunomodulatory macrophages reduces the pro-inflammatory microenvironment and increases bone formation on titanium implants.
Acta Biomater 188, 432–445.
PrimePCR Assays were used to analyze gene expression changes in macrophages and bone-forming cells. By leveraging qPCR technology, researchers could measure inflammatory cytokines, osteogenic markers, and macrophage polarization genes, confirming the effectiveness of immunomodulatory macrophages in enhancing bone regeneration.

Posch W et al. (2021).
C5aR inhibition of nonimmune cells suppresses inflammation and maintains epithelial integrity in SARS-CoV-2–infected primary human airway epithelia.
J Allergy Clin Immunol 147, 2083–2097.e6.
C5aR inhibition to suppress inflammation in severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infections was explored. PrimePCR Assays were used to measure cytokine expression profiles (for example, IL-6, IL-8, TNF-α) in airway epithelia.

Ray JL et al. (2022).
Nanoparticle-induced airway eosinophilia is independent of ILC2 signaling but associated with sex differences in macrophage phenotype development.
J Immunol 208, 110–120.
Nanoparticle-induced airway eosinophilia was investigated. PrimePCR Assays were used to assess macrophage polarization and Th2-related cytokine expression.

Sokołowska P et al. (2022).
Diclofenac diminished the unfolded protein response (UPR) induced by tunicamycin in human endothelial cells.
Molecules 27, 3449.
Researchers examined the effects of diclofenac on the UPR in human endothelial cells under tunicamycin-induced stress. PrimePCR Assays enabled precise quantification of UPR-related gene expression, while the CFX96 Touch Real-Time PCR System ensured accurate and reproducible results.

Microbiology

Hellysaz A et al. (2023).
Microbiota do not restrict rotavirus infection of colon.
J Virol 97, e0152623.
Researchers investigated rotavirus infection dynamics in the colon. PrimePCR Assays were used to quantify viral load and host immune responses in gut epithelium.

Molecular Biology

Thompson SD (2024).
Extracting high-quality RNA from formaldehyde-fixed naturally aged neuromusculoskeletal tissues.
Biotechniques 76, 153–160.
RNA extraction methods for formaldehyde-fixed tissues were developed. PrimePCR Assays were used to validate RNA integrity for downstream qPCR assays.

Neurobiology

Jóźwiak-Bębenista M et al. (2022).
The importance of endoplasmic reticulum stress as a novel antidepressant drug target and its potential impact on CNS disorders.
Pharmaceutics 14, 846.
Unfolded protein response pathways are activated by endoplasmic reticulum stress and are implicated in major depressive disorders. Custom PrimePCR qPCR plates and PrimePCR controls were utilized for gene expression analysis of these pathways.

Solich J et al. (2024).
Modulating stress susceptibility and resilience: Insights from miRNA manipulation and neural mechanisms in mice.
Mol Neurobiol 61, 6135–6147.
Scientists explored the role of microRNA (miRNA) in stress response, using PrimePCR Assays for precise quantification of miRNA expression in neural tissues.

Wickramasekara RN et al. (2021).
Differential effects by sex with Kmt5b loss.
Autism Res 14, 1554–1571.
Researchers studied x-dependent effects of Kmt5b loss in autism spectrum disorders. PrimePCR Assays were used to validate gene expression changes in Kmt5b and related epigenetic regulators.

Neuroimmunology

Marquez-Ortiz RA (2023).
Neuroimmune support of neuronal regeneration and neuroplasticity following cerebral ischemia in juvenile mice.
Brain Sci 13, 1337.
Immune support in neuronal regeneration post-stroke was studied. PrimePCR Assays were used to measure neuroinflammatory cytokines (for example, IL-1β, TNF-α) in brain tissue.

Physiology

Gawryś-Kopczyńska M (2024).
Spontaneously hypertensive rats exhibit increased liver flavin monooxygenase expression and elevated plasma TMAO levels compared to normotensive and Ang II-dependent hypertensive rats.
Front Physiol 15, 1340166.
Trimethylamine N-oxide (TMAO) metabolism in hypertensive rats was analyzed. PrimePCR Assays were used to measure flavin-containing monooxygenase (FMO) gene expression in metabolic studies.

Psychiatry

Spano L et al. (2024).
Decreased telomere length in a subgroup of young individuals with bipolar disorders: Replication in the FACE-BD cohort and association with the shelterin component POT1.
Transl Psychiatry 14, 131.
The study linked telomere length with bipolar disorder, focusing on POT1. PrimePCR Assays were used to assess expression of telomere maintenance genes in psychiatric disorders.

Reproductive Biology

Robinson M et al. (2024).
A novel sorting method for the enrichment of early human spermatocytes from clinical biopsies.
F S Sci 5, 130–140.
Researchers developed a new method for enriching early human spermatocytes from clinical biopsies, improving the study of male fertility. PrimePCR Assays facilitated precise gene expression analysis, ensuring accurate characterization of spermatocyte populations.

Stem Cell Biology

Abbà C et al. (2024).
Circulating mesenchymal stromal cells in patients with infantile hemangioma: Evaluation of their functional capacity and gene expression profile.
Cells 13, 254.
Mesenchymal stromal cells in infantile hemangioma were characterized. PrimePCR Assays were used to profile stem cell differentiation markers and angiogenesis-related genes.

Pieles O et al. (2021).
AMP-activated protein kinase and the down-stream activated process of autophagy regulate the osteogenic differentiation of human dental follicle cells.
Arch Oral Biol 122, 104951.
PrimePCR Assays played a key role in the study by enabling precise gene expression analysis of key markers involved in osteogenic differentiation. The researchers used qPCR-based assays to quantify the expression levels of osteogenic genes, confirming the impact of AMPK activation and autophagy-related pathways on cell differentiation.

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