

XRNA PGK1 Near Infrared

Human RNA FISH

Order No.:
R-0204-020-IR

Description

The XRNA PGK1 probe kit comprises 96 oligos detecting the human PGK1 mRNA. We are using the proprietary HuluFISH enzymatic multi fluorophore labeling technique enabling the detection of RNA at the single-cell, single-molecule level in cell and tissue samples. The probe kit is labeled in near infrared (Atto647N).

Clinical Details

Phosphoglycerate kinase 1 (PGK1) is encoded by the X-chromosomal PGK1 gene and is ubiquitously expressed. The resulting polypeptide is a central enzyme of aerobic glycolysis and essential for the formation of adenosine triphosphate (ATP), which is referred to as the molecular unit of intracellular energy currency. Countless metabolic processes and enzymatic reactions are linked to the hydrolysis of ATP. PGK1 catalyzes the reversible formation of 3-phosphoglycerate and ATP by transferring a phosphate group from 1,3-bisphosphoglycerate to adenosine diphosphate (ADP). On top of maintaining cell metabolism, PGK1 has additional functions, depending also on its localization within the cell.

PGK1 is a commonly used housekeeping gene utilized in gene expression analyses, for example in real-time reverse transcription PCR assays. Housekeeping genes are used to normalize expression values of analyzed genes in gene expression assays. However, it has become clear that the expression levels of housekeeping genes can show considerable variation, depending on the experimental conditions and analyzed tissue. PGK1 has been shown to be a stably expressed housekeeping gene for performing expression studies of leukocytes.

Note

*For Research Use Only (RUO). Not for diagnostic procedures.
Powered by HuluFISH technology from PixelBiotech.*

Literature

- Abruzzo et al (2005) Biotechniques 38:785-792
- Vega-Sanchez et al (2015) Placenta 36:240-245
- Fu and Yu (2020) Life Sci 256:117863

FACTSHEET





MetaSystems Probes

EUROPE & RUSSIA

Germany, Altlussheim
info@metasystems-probes.com

Italy, Milano
info@metasystems-italy.com

Russia, Moscow
info@metasystems.su

AMERICA

USA, Medford
info@metasystems.org

Argentina, Buenos Aires
info@metasystems-latam.com

ASIA & INDIA

China, Hong Kong
info@metasystems-asia.com

China, Taizhou
info@metasystems-china.com

India, Bangalore
info@metasystems-india.com

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