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Product Data Sheet
PML-RARa Standards

Cat. #: PR-S1, PR-S2, PR-S3

PML-RARa Clinical Relevance:

Acute Promyelocytic Leukemia (APL) accounts for 10-15% of Acute Myeloid Leukemia (AML) and is one of the most curable forms of leukemia with good sensitivity to all-trans retinoic acid (ATRA). Nearly all APL cases are characterized by the presence of the PML-RARa t(15;17) fusion gene transcript which is required for ATRA treatment response. Researchers have identified the utility of measuring PML-RARa transcripts to aid in the classification of APL, predicting treatment response, and monitoring minimal residual disease (MRD).[1,2]

CytoGenes offers primer mixes, standards, and controls allowing laboratories to detect the three most common PML-RARa fusions by quantitative PCR (bcr1, bcr2, and bcr3). PML-RARa transcripts levels can be normalized against the transcript levels of the endogenously expressed Abl gene.

Product Description:

DNA standards can be utilized to generate a standard curve in Q-PCR reactions to calculate concentrations for indicated targets in test samples. Each standard contains an equal mixture of a DNA fragments specific for each of the indicated targets (See Product Specifications). All DNA targets are represented at the same concentration as indicated. Note that successful amplification of DNA standards does not reflect successful amplification of RNA samples.
Standards are designed to yield positive results in reverse transcription PCR reactions for PML-RARa bcr1, bcr2, and bcr3 primer sets as well as the primer set for the endogenous ABL gene.

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Product Specifications:

The table below indicates the assay targets and concentrations for each of the DNA Standards.

Cat #	Item	Assay Targets Included	Concentration
PR-S1	PML-RARa Standard-1	ABL, PML-RARa (bcr1, bcr2, bcr3)	$5e^5$ copies/ul
PR-S2	PML-RARa Standard-2	ABL, PML-RARa (bcr1, bcr2, bcr3)	$5e^4$ copies/ul
PR-S3	PML-RARa Standard-3	ABL, PML-RARa (bcr1, bcr2, bcr3)	$5e^3$ copies/ul

Volume: 45µl
Reactions: 20 (2µl/ reaction)

Procedure:

Researchers are advised to optimize the use of these standards in any application. DNA standards should be tested utilizing the same conditions as utilized for test samples. The volume of DNA standard used in a PCR reaction should be the same as all other test samples.

Storage:

Store at -20°C. Once open store at 4°C. Repeated freezing/thaw cycles should be avoided.

References:

1. Cull EH, Altman JK. Contemporary Treatment of APL. *Current hematologic malignancy reports*. 2014;9(2):193-201. doi:10.1007/s11899-014-0205-6.

2. Lo-Coco F, Cicconi L. History of Acute Promyelocytic Leukemia: A Tale of Endless Revolution. *Mediterranean Journal of Hematology and Infectious Diseases*. 2011;3(1):e2011067. doi:10.4084/MJHID.2011.067.