Gene Section
Mini Review

PIM1 (pim-1 oncogene)
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Identity
HGNC (Hugo): PIM1
Location: 6p21.2

DNA/RNA

Description
5 kb of genomic DNA; 6 exons.

Transcription
2.6 kb mRNA; coding sequence 941 bp.

Protein

Description
313 amino acids, 36 kDa; protein kinase domain, ATP-binding site.

Expression
Plays a role in signal transduction in blood cells.

Function
Serine/threonine-protein kinase; regulated by hematopoietic cytokine receptors; synergy with c-MYC in cell proliferation and in apoptosis induction (through an enhancement of the activation of caspase-3-like proteases; Cdc25A (cell cycle phosphatase) is a substrate for Pim-1.

Implicated in

t(3;6)(q27;p21.2) diffuse large B-cell lymphoma (DLCL) --> BCL6 / PIM1

Note
Only 1 case to date.

Hybrid/Mutated gene
5' PIM1 - 3' BCL6 fusion transcript; it is supposed that substitution of the promoter of BCL6 may be responsible for BCL6 deregulation.

References


This article should be referenced as such: