

Product Data Sheet

Product Name: Cyclin D1

Cat. No.: GP10048

Chemical Properties

Cas. No.

Formula $C_{43}H_{71}N_9O_{11}S_2$

M.Wt 954.21

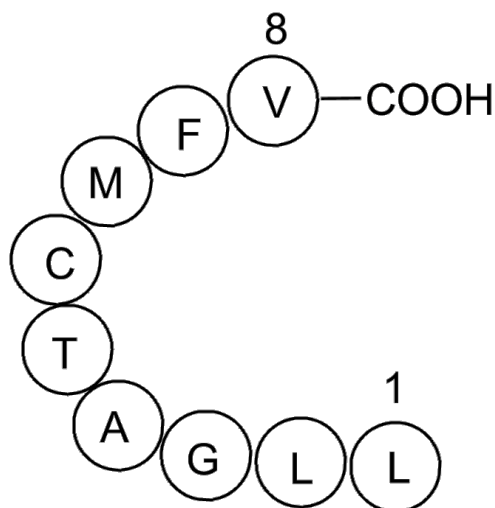
Solubility

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

G1/S-specific cyclin-D1 (H₂N-Leu-Leu-Gly-Ala-Thr-Cys-Met-Phe-Val-OH) is a protein that in humans is encoded by the CCND1 gene. [1] The protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance throughout the cell cycle. Cyclins function as regulators of Cyclin-dependent Kinases (CDKs). Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event.

Cyclin D1 has been shown to interact with Thyroid hormone receptor beta, CCNDBP1,

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Retinoblastoma protein, Androgen receptor, Cyclin-dependent kinase 4, Cyclin-dependent kinase 6, TAF1, NEUROD1, PCNA, Nuclear receptor coactivator 1, Estrogen receptor alpha and HDAC3. [2]

This cyclin forms a complex with and functions as a regulatory subunit of CDK4 or CDK6, whose activity is required for cell cycle G1/S transition. This protein has been shown to interact with tumor suppressor protein Rb, and the expression of this gene is regulated positively by Rb. Mutations, amplification and overexpression of this gene, which alters cell cycle progression, are observed frequently in a variety of tumors and may contribute to tumorigenesis. [3]



Fig 1. Structure of protein CCND1.

Ref:

1. Motokura T, Bloom T, Kim HG, Juppner H, Ruderman JV, Kronenberg HM, Arnold A (May 1991). "A novel cyclin encoded by a bcl1-linked candidate oncogene". *Nature* **350** (6318): 512–5.
2. Lin, Huei-Min; Zhao Li, Cheng Sheue-Yann (August 2002). "Cyclin D1 Is a Ligand-independent Co-repressor for Thyroid Hormone Receptors". *J. Biol. Chem. (United States)* **277** (32): 28733–41.
3. "Entrez Gene: CCND1 cyclin D1".

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA