



Product Datasheet

Product Name	p21WAF1 Protein Human Recombinant
Cata No	CB500921
Source	<i>Escherichia Coli.</i>
Synonyms	Cyclin-dependent kinase inhibitor 1, p21, CDK-interacting protein 1, Melanoma differentiation-associated protein 6, MDA-6, CDKN1A, CAP20, CDKN1, CIP1, MDA6, PIC1, SDI1, WAF1, p21CIP1.

Description

p21WAF1/Cip1/Sdi1/Pic1 is a tumor suppressor protein. Expression of p21WAF1 is induced by wild type, but not mutant, p53 suppressor protein. p21 is the main transcriptional target of p53 (a tumor suppressor gene) despite this, loss-of-function mutations in p21 (unlike p53) don't accumulate in cancer nor do they predispose to cancer occurrence. The p21WAF1 protein binds to cyclin/CDK complexes (CDK2 or CDK4) and inhibits their kinase activity thereby stopping cell cycle progression at G1. p21 is reported to be specifically cleaved by CASP3-like caspases, which consequently leads to a powerful activation of CDK2, and may be involved in the execution of apoptosis following caspase activation. Meanwhile, the p21WAF1 protein also binds to PCNA (proliferating cell nuclear antigen) and blocks DNA replication but not the DNA repair process. Evidently, inactivation of p53 disrupts the p53-dependent expression of p21WAF1. p21WAF1 is a tumor suppressor involved in the pathogenesis of a variety of malignancies. p21 is a regulator of cell cycle progression at S phase. p21 function relates partly to stress response. p21 is Expressed in all adult

human tissues, however 5-fold lower levels were observed in the brain. There are 2 alternatively spliced variants, which encode an identical protein. p21-WAF1 Human Recombinant full length protein expressed in E.coli, shows a 47 kDa SDS-PAGE. The p21 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered clear solution.

Formulation

p21 in 50mM Tris-Acetate pH-7.5, 1mM EDTA and 20% Glycerol.

Stability

Store vial at -20°C to -80°C. When stored at the recommended temperature, this protein is stable for 12 months.

Please prevent freeze-thaw cycles.

Applications

- ELISA
- Inhibition Assays
- Western Blotting