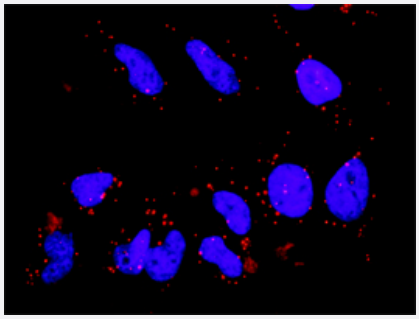
TP53 & CDKN1A Protein Protein Interaction Antibody Pair

Catalog # DI0086 Size 1 Set

Applications



Representative image of Proximity Ligation Assay of protein-protein interactions between TP53 and CDKN1A. HeLa cells were stained with anti-TP53 rabbit purified polyclonal antibody 1:1200 and anti-CDKN1A mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex. The images were analyzed using an optimized freeware (BlobFinder) download from The Centre for Image Analysis at Uppsala University.

Specification

Product Description	This protein protein interaction antibody pair set comes with two antibodies to detect the protein-protein interaction, one against the TP53 protein, and the other against the CDKN1A protein for use in *in situ* Proximity Ligation Assay. See Publication Reference below.
Reactivity	Human
Quality Control Testing	Protein protein interaction immunofluorescence result. Representative image of Proximity Ligation Assay of protein-protein interactions between TP53 and CDKN1A. HeLa cells were stained with anti-TP53 rabbit purified polyclonal antibody 1:1200 and anti-CDKN1A mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex. The images were analyzed using an optimized freeware (BlobFinder) download from The Centre for Image Analysis at Uppsala University.
Supplied Products	Antibody pair set content: 1. TP53 rabbit purified polyclonal antibody (100 ug) 2. CDKN1A mouse monoclonal antibody (40 ug) *Reagents are sufficient for at least 30-50 assays using recommended protocols.
Storage Instruction	Store reagents of the antibody pair set at -20°C or lower. Please aliquot to avoid repeated freeze thaw cycle. Reagents should be returned to -20°C storage immediately after use.

Applications

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- *In situ* Proximity Ligation Assay (Cell)

Gene Info — CDKN1A

Entrez GeneID	1026
Gene Name	CDKN1A
Gene Alias	CAP20, CDKN1, CIP1, MDA-6, P21, SDI1, WAF1, p21CIP1
Gene Description	cyclin-dependent kinase inhibitor 1A (p21, Cip1)
Omim ID	116899
Gene Ontology	Hyperlink
Gene Summary	This gene encodes a potent cyclin-dependent kinase inhibitor. The encoded protein binds to and inhibits the activity of cyclin-CDK2 or -CDK4 complexes, and thus functions as a regulator of cell cycle progression at G1. The expression of this gene is tightly controlled by the tumor suppressor protein p53, through which this protein mediates the p53-dependent cell cycle G1 phase arrest in response to a variety of stress stimuli. This protein can interact with proliferating cell nuclear antigen (PCNA), a DNA polymerase accessory factor, and plays a regulatory role in S phase DNA replication and DNA damage repair. This protein was reported to be specifically cleaved by CASP3-like caspases, which thus leads to a dramatic activation of CDK2, and may be instrumental in the execution of apoptosis following caspase activation. Two alternatively spliced variants, which encode an identical protein, have been reported. [provided by RefSeq
Other Designations	CDK-interaction protein 1|DNA synthesis inhibitor|OTTHUMP00000016298|cyclin-dependent kinase inhibitor 1A|melanoma differentiation associated protein 6|wild-type p53-activated fragment 1

Gene Info — TP53

Entrez GeneID	7157
Gene Name	TP53
Gene Alias	FLJ92943, LFS1, TRP53, p53
Gene Description	tumor protein p53
Omim ID	114480 114500 114550 151623 161550 191170 202300 260350
Gene Ontology	Hyperlink

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Gene Summary	This gene encodes tumor protein p53, which responds to diverse cellular stresses to regulate target genes that induce cell cycle arrest, apoptosis, senescence, DNA repair, or changes in metabolism. p53 protein is expressed at low level in normal cells and at a high level in a variety of transformed cell lines, where it's believed to contribute to transformation and malignancy. p53 is a DNA-binding protein containing transcription activation, DNA-binding, and oligomerization domains. It is postulated to bind to a p53-binding site and activate expression of downstream genes that inhibit growth and/or invasion, and thus function as a tumor suppressor. Mutants of p53 that frequently occur in a number of different human cancers fail to bind the consensus DNA binding site, and hence cause the loss of tumor suppressor activity. Alterations of this gene occur not only as somatic mutations in human malignancies, but also as germline mutations in some cancer-prone families with Li-Fraumeni syndrome. Multiple p53 variants due to alternative promoters and multiple alternative splicing have been found. These variants encode distinct isoforms, which can regulate p53 transcriptional activity. [provided by RefSeq
Other Designations	p53 antigen|p53 transformation suppressor|p53 tumor suppressor|phosphoprotein p53|transformation-related protein 53

Pathway

- Amyotrophic lateral sclerosis (ALS)
- Apoptosis
- Basal cell carcinoma
- Bladder cancer
- Bladder cancer
- Cell cycle
- Cell cycle
- Chronic myeloid leukemia
- Chronic myeloid leukemia
- Colorectal cancer
- Endometrial cancer
- ErbB signaling pathway
- Glioma
- Glioma
- MAPK signaling pathway
- Melanoma

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- Melanoma
- Neurotrophin signaling pathway
- Non-small cell lung cancer
- p53 signaling pathway
- p53 signaling pathway
- Pancreatic cancer
- Pathways in cancer
- Pathways in cancer
- Prostate cancer
- Prostate cancer
- Small cell lung cancer
- Thyroid cancer
- Wnt signaling pathway

Disease

- Abortion
- Acquired Hyperostosis Syndrome
- Acute Disease
- Adenocarcinoma
- Adenocarcinoma
- Adenoma
- Adenomatous Polyposis Coli
- Adrenal Cortex Neoplasms
- Albuminuria
- Alcoholism
- Alzheimer disease

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- Ameloblastoma
- Aneuploidy
- Anoxia
- Anus Neoplasms
- Arsenic Poisoning
- Arthritis
- Astrocytoma
- Ataxia telangiectasia
- Ataxia telangiectasia
- Atherosclerosis
- Atherosclerosis
- Autoimmune Diseases
- Azoospermia
- Balkan Nephropathy
- Barrett Esophagus
- Bipolar Disorder
- Bone Neoplasms
- Brain Infarction
- Brain Injuries
- Brain Ischemia
- Brain Neoplasms
- Brain Neoplasms
- Breast cancer
- Breast cancer
- Breast Neoplasms
- Breast Neoplasms

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- Carcinoma
- Carcinoma
- Carcinoma in Situ
- Cardiovascular Diseases
- Cardiovascular Diseases
- Carotid Artery Diseases
- Carotid Artery Thrombosis
- Cell Transformation
- Cerebellar Neoplasms
- Cerebral Infarction
- Cervical Intraepithelial Neoplasia
- Chagas Disease
- Cholecystitis
- Choriocarcinoma
- Choroid Plexus Neoplasms
- Chromosomal Instability
- Chromosome Aberrations
- Chromosome Aberrations
- Chromosome Deletion
- Chronic Disease
- Chronic Disease
- Cicatrix
- Cocarcinogenesis
- Cognition Disorders
- Colitis
- Colon cancer

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- Colonic Neoplasms
- Colorectal Neoplasms
- Colorectal Neoplasms
- Condylomata Acuminata
- Conjunctival Neoplasms
- Constriction
- Coronary Artery Disease
- Coronary Disease
- Coronary Restenosis
- Craniocerebral Trauma
- Crohn Disease
- Cystadenocarcinoma
- Delayed Graft Function
- Depressive Disorder
- Diabetes Mellitus
- Diabetes Mellitus
- Diabetic Nephropathies
- Digestive System Neoplasms
- Disease Progression
- Disease Progression
- Disease Susceptibility
- DNA Damage
- DNA Damage
- Down Syndrome
- Duodenal Ulcer
- Edema

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- Edema
- Ehlers-Danlos Syndrome
- Endometrial Hyperplasia
- Endometrial Neoplasms
- Endometriosis
- Epidermodysplasia Verruciformis
- Epstein-Barr Virus Infections
- Esophageal Neoplasms
- Esophageal Neoplasms
- Fallopian Tube Neoplasms
- Gallbladder Neoplasms
- Ganglioglioma
- Gastritis
- Gastroesophageal Reflux
- Gastrointestinal Neoplasms
- Gastrointestinal Stromal Tumors
- Genetic Diseases
- Genetic Predisposition to Disease
- Genetic Predisposition to Disease
- Genital Neoplasms
- Genomic Instability

- Glaucoma
- Glaucoma
- Glioblastoma
- Glioma

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- Glioma
- Graft Occlusion
- Graves Disease
- Hashimoto Disease
- Head and Neck Neoplasms
- Head and Neck Neoplasms
- Helicobacter Infections
- Helicobacter Infections
- Hematologic Diseases
- Hepatitis B
- Hepatitis C
- Herpes Simplex
- HIV Infections
- Hodgkin Disease
- Hydatidiform Mole
- Hypopharyngeal Neoplasms
- Hypotension
- Infertility
- Inflammation
- Inflammatory Bowel Diseases
- Intestinal Neoplasms
- Intestinal Neoplasms
- Intracranial Thrombosis
- Keloid
- Keratosis
- Kidney Failure
- Kidney Failure

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- Kidney Neoplasms
- Laryngeal Neoplasms
- Laryngeal Neoplasms
- Leber hereditary optic neuropathy
- Leiomyoma
- Leiomyoma
- Leukemia
- Leukemia
- Leukoplakia
- Lichen Planus
- Li-Fraumeni Syndrome
- Lissencephaly
- Liver Cirrhosis
- Liver Neoplasms
- Low Tension Glaucoma
- Low Tension Glaucoma
- Lung Neoplasms
- Lung Neoplasms
- Lupus Erythematosus
- Lupus Erythematosus
- Lupus Nephritis
- Lupus Nephritis
- Lymphatic Metastasis
- Lymphoma
- Lymphoma
- Lymphoproliferative Disorders

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- Malignant melanoma
- Malignant melanoma
- Medulloblastoma
- Melanoma
- Melanoma
- Meningeal Neoplasms
- Meningioma
- Meningioma
- Mental Retardation
- Metaplasia
- Microsatellite Instability
- Mouth Neoplasms
- Mouth Neoplasms
- Multiple endocrine neoplasia
- Multiple Endocrine Neoplasia Type 1
- Multiple Myeloma
- Multiple Sclerosis
- Myelodysplastic Syndromes
- Myocardial Infarction
- Nasopharyngeal Neoplasms
- Nasopharyngeal Neoplasms
- Neoplasm Invasiveness
- Neoplasm Invasiveness
- Neoplasm Metastasis
- Neoplasm Recurrence
- Neoplasm Recurrence

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- Neoplasms
- Neoplasms
- Nerve Sheath Neoplasms
- Neural Tube Defects
- Neurilemmoma
- Neuroectodermal Tumors
- Neurofibroma
- Neurofibromatosis
- Neurofibromatosis 2
- Neuroma
- Neuroma
- Neuropsychological Tests
- Neutropenia
- Nijmegen Breakage Syndrome
- Nose Neoplasms
- Obesity
- Occupational Diseases
- Occupational Diseases
- Ocular Hypertension
- Ocular Hypertension
- Oligodendroglioma
- Oligospermia
- Optic Atrophy
- Oral Submucous Fibrosis
- Oropharyngeal Neoplasms
- Osteoarthritis

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- Osteosarcoma
- Ovarian cancer
- Ovarian cancer
- Ovarian Neoplasms
- Ovarian Neoplasms
- Pancreatic cancer
- Pancreatic cancer
- Pancreatic Neoplasms
- Pancreatic Neoplasms
- Papilloma
- Papillomavirus Infections
- Papillomavirus Infections
- Pemphigus
- Penile Neoplasms
- Peptic Ulcer
- Peritoneal Neoplasms
- Pharyngeal Neoplasms
- Pharyngeal Neoplasms
- Postoperative Complications

- Precancerous Conditions
- Precancerous Conditions
- Prostate cancer
- Prostate cancer
- Prostatic Hyperplasia
- Prostatic Hyperplasia

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- Prostatic Intraepithelial Neoplasia
- Prostatic Neoplasms
- Prostatic Neoplasms
- Psoriasis
- Pterygium
- Pulmonary Disease
- Pulmonary Disease
- Pulmonary Fibrosis
- Radiation Injuries
- Radiation Injuries
- Radiodermatitis
- Rectal Neoplasms
- Recurrence
- Roseolovirus Infections
- Sarcoma
- Schizophrenia
- Skin Diseases
- Skin Diseases
- Skin Neoplasms
- Skin Neoplasms
- Small Cell Lung Carcinoma
- Spinal Dysraphism
- Stomach Neoplasms
- Stomach Neoplasms
- Stomach Ulcer
- Subarachnoid Hemorrhage

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- Substance-Related Disorders
- Sunburn
- The p53 tumor suppressor protein
- Thyroid Diseases
- Thyroid Neoplasms
- Thyroiditis
- Tobacco Use Disorder
- Tongue Neoplasms
- Tumor Virus Infections
- Uremia
- Urinary Bladder Neoplasms
- Urinary Bladder Neoplasms
- Urologic Diseases
- Uterine Cervical Diseases
- Uterine Cervical Dysplasia
- Uterine Cervical Neoplasms
- Uterine Cervical Neoplasms
- Uterine Neoplasms
- Uterine Neoplasms
- Waldenstrom Macroglobulinemia
- Wegener Granulomatosis
- Werner syndrome

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