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[Primary Antibody]

Rabbit Anti-C1orf124 antibody

Catalog Number: SL15013R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	C1orf124
Immunogen:	KLH conjugated synthetic peptide derived from human C1orf124: 31-130/489
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	ELISA=1:5000-10000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	(predicted: Human, Mouse, Rat, Dog, Pig, Cow, Horse, Rabbit)
Predicted MW.:	55kDa
Subcellular Location:	The nucleus
Background:	Chromosome 1 is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes lamin A. When defective, the LMNA gene product can build up in the nucleus and cause characteristic nuclear blebs. The mechanism of rapidly enhanced aging is unclear and is a topic of continuing exploration. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1. A breakpoint has been identified in 1q which disrupts the DISC1 gene and is linked to schizophrenia. Aberrations in chromosome 1 are found in a variety of cancers including head and neck

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	cancer, malignant melanoma and multiple myeloma. The C1orf124 gene product has been provisionally designated C1orf124 pending further characterization. **Function:** Regulator of UV-induced DNA damage response: acts as a 'reader' of ubiquitinated PCNA that enhances RAD18-mediated PCNA ubiquitination and translesion DNA synthesis (TLS). Recruited to sites of UV damage and interacts with ubiquitinated PCNA and RAD18, the E3 ubiquitin ligase that monoubiquitinates PCNA. Facilitates chromatin association of RAD18 and is required for efficient PCNA monoubiquitination, promoting a feed-forward loop to enhance PCNA ubiquitination and translesion DNA synthesis. Acts as a regulator of TLS by recruiting VCP/p97 to sites of DNA damage, possibly leading to extraction of DNA polymerase eta (POLH) by VCP/p97 to prevent excessive translesion DNA synthesis and limit the incidence of mutations induced by DNA damage. **Subunit:** Interacts with PCNA (when ubiquitinated). Interacts with RAD18. Interacts (via its SHP-box) with VCP/p97. Interacts with KCTD13 and POLD3. **Subcellular Location:** Nucleus. Chromosome. Note=Localizes to sites of UV damage via the PIP-box. Recruited to stalled relication forks at sites of replication stress. **Similarity:** Belongs to the Spartan family. Contains 1 SprT-like domain. Contains 1 UBZ-type zinc finger. **Database links:** **Entrez Gene:** 83932 Human **SwissProt:** Q9H040 Human **Unigene:** 554892 Human

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