

Rabbit anti-Human CDK13 Polyclonal Antibody | anti-CDK13 antibody

Anti-CDK13 Antibody

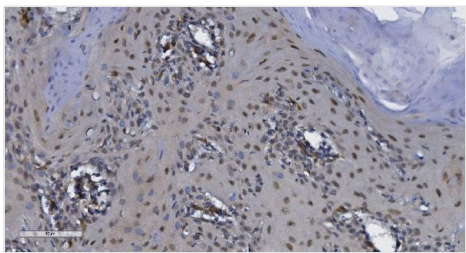
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA125745	Rabbit	Human	ELISA, Flow Cytometry, Functional Assay, Immunofluorescence, Immunocytochemistry, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

CDK13; Polyclonal Antibody; Anti-CDK13 Antibody; CDC2L; CDC2L5; CHED; KIAA1791; Cyclin-dependent kinase 13; CDC2-related protein kinase 5; Cell division cycle 2-like protein kinase 5; Cell division protein kinase 13; hCDK13; Cholinesterase-related cell division controller; cyclin dependent kinase 13; anti-CDK13 antibody

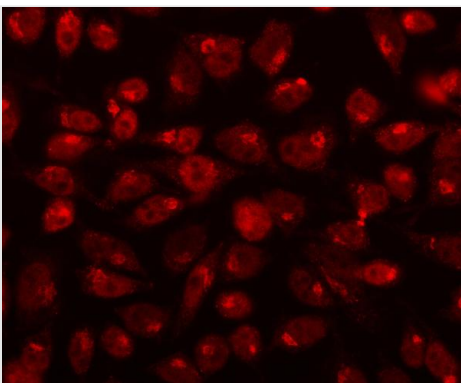
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for CDK13 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na ₂ HPO ₄ .
Applicable Applications for anti-CDK13 antibody	ELISA (Direct ELISA), FCM/FACS (Flow Cytometry), IF (Immunofluorescence), ICC (Immunocytochemistry), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	E Coli-derived human CDK13 recombinant protein (Position: D1052-N1338).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



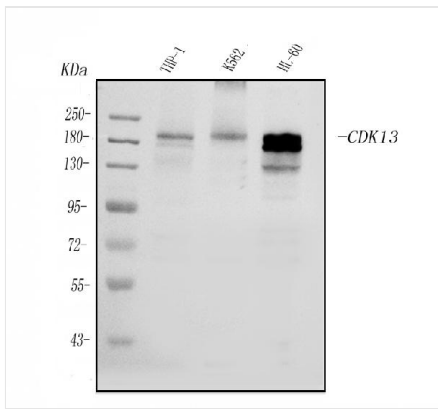
IHC (Immunohistochemistry)

Figure 4. IHC analysis of CDK13 using anti-CDK13 antibody (AAA125745).CDK13 was detected in paraffin-embedded section of human esophageal squamous carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml rabbit anti-CDK13 Antibody (AAA125745) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



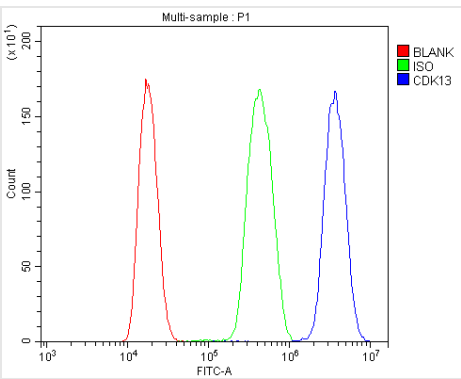
IF (Immunofluorescence)

Figure 3. IF analysis of CDK13 using anti- CDK13 antibody (AAA125745).CDK13 was detected in immunocytochemical section of HELA cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5μg/mL rabbit anti- CDK13 Antibody (AAA125745) overnight at 4 degree C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



WB (Western Blot)

Figure 1. Western blot analysis of CDK13 using anti-CDK13 antibody (AAA125745).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: human THP-1 whole cell lysatesLane 2: human K562 whole cell lysatesLane 3: human HL-60 whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with rabbit anti-CDK13 antigen affinity purified polyclonal antibody (Catalog # AAA125745) at 0. 5 μg/mL overnight at 4 degree C, then washed with TBS-0. 1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for CDK13 at approximately 185-190KD. The expected band size for CDK13 is at 165KD.



FCM/FACS (Flow Cytometry)

Figure 2. Flow Cytometry analysis of K562 cells using anti-CDK13 antibody (AAA125745).Overlay histogram showing K562 cells stained with AAA125745 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CDK13 Antibody (AAA125745, 1μg/1x10⁶ cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

ADDITIONAL INFORMATION

Related Product Information for anti-CDK13 antibody

Cyclin dependent kinase 13 is an enzyme that in humans is encoded by the CDK13 gene. The protein encoded by this gene is a member of the cyclin-dependent serine/threonine protein kinase family. Members of this family are well known for their essential roles as master switches in cell cycle control. The exact function of this protein has not yet been determined, but it may play a role in mRNA processing and may be involved in regulation of hematopoiesis. Alternatively spliced transcript variants have been described.

References	1. Hamilton, M. J., Caswell, R. C., Canham, N., Cole, T., Firth, H. V., Foulds, N., Heimdal, K., Hobson, E., Houge, G., Joss, S., Kumar, D., Lampe, A. K. Heterozygous mutations affecting the protein kinase domain of CDK13 cause a syndromic form of developmental delay and intellectual disability. <i>J. Med. Genet.</i> 55: 28-38, 2018. 2. Lapidot-Lifson, Y., Patinkin, D., Prody, C. A., Ehrlich, G., Seidman, S., Ben-Aziz, R., Benseler, F., Eckstein, F., Zakut, H., Soreq, H. Cloning and antisense oligodeoxynucleotide inhibition of a human homolog of cdc2 required in hematopoiesis. <i>Proc. Nat. Acad. Sci.</i> 89: 579-583, 1992. 3. Sifrim, A., Hitz, M. -P., Wilsdon, A., Breckpot, J., Al Turki, S. H., Thienpont, B., McRae, J., Fitzgerald, T. W., Singh, T., Swaminathan, G. J., Prigmore, E., Rajan, D., and 63 others. Distinct genetic architectures for syndromic and nonsyndromic congenital heart defects identified by exome sequencing. <i>Nature Genet.</i> 48: 1060-1065, 2016.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	145309302
NCBI GeneID	8621
NCBI Accession #	NP_003709
NCBI GenBank Nucleotide #	NM_003718
UniProt Accession #	Q14004; Q53G78; Q6DKQ9; Q75MH4; Q75MH5; Q96JN4; Q9H4A0; Q9H4A1; Q9UDR4
Molecular Weight	158,435 Da
NCBI Official Full Name	cyclin-dependent kinase 13 isoform 1
NCBI Official Synonym Full Names	cyclin-dependent kinase 13
NCBI Official Symbol	CDK13
NCBI Official Synonym Symbols	CHED; CDC2L; CDC2L5; hCDK13
NCBI Protein Information	cyclin-dependent kinase 13; CDC2-related protein kinase 5; cell division cycle 2-like protein kinase 5; cell division protein kinase 13; cholinesterase-related cell division controller
UniProt Protein Name	Cyclin-dependent kinase 13
UniProt Gene Name	CDK13
UniProt Synonym Gene Names	CDC2L; CDC2L5; CHED; KIAA1791; hCDK13
UniProt Entry Name	CDK13_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.