

# K12 (C-18): sc-139364

## BACKGROUND

K12, also known as SECTM1 (secreted and transmembrane 1), is a 248 amino acid single-pass type I membrane and secreted protein that is expressed in peripheral blood leukocytes, breast cancer cell lines, granulocytes, thymic epithelial cells and fibroblasts. Belonging to the SECTM family, K12 is a novel protein that is suggested to be involved in hematopoietic and/or immune system processes. K12 stimulates the up-regulation of IL-2R $\alpha$ , ICAM-1 and CD69 on human NK cells. K12 is encoded by a gene located on human chromosome 17q25.3. Chromosome 17 comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: SECTM1 (human) mapping to 17q25.3.

## SOURCE

K12 (C-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of K12 of human origin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-139364 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

K12 (C-18) is recommended for detection of K12 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for K12 siRNA (h): sc-93717, K12 shRNA Plasmid (h): sc-93717-SH and K12 shRNA (h) Lentiviral Particles: sc-93717-V.

Molecular Weight of K12 membrane bound form: 27 kDa.

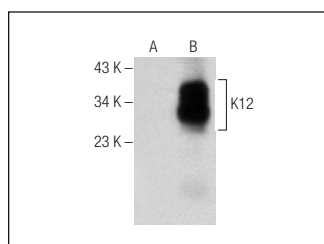
Molecular Weight of K12 soluble form: 20 kDa.

Positive Controls: K12 (h): 293T Lysate: sc-177417.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## DATA



K12 (C-18): sc-139364. Western blot analysis of K12 expression in non-transfected: sc-117752 (A) and human K12 transfected: sc-177417 (B) 293T whole cell lysates.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.