SANTA CRUZ BIOTECHNOLOGY, INC.

Ig κ light chain (mAHuIgk): sc-73324

BACKGROUND

The basic structural unit of most mammalian antibodies is a glycoprotein composed of four polypeptide chains—two light chains and two heavy chains, which are connected by disulfide bonds. Each light chain is composed of two domains, one variable domain (VL) and one constant domain (CL). The variable region genes encoding immunoglobulin κ and λ chains are assembled from three DNA segments, the V, C and J genes. Human κ light chain genes map to chromosome 2 and the human λ light chain genes map to chromosome 22. κ gene recombination can precede λ gene recombination during B cell ontogeny and only a single light chain type is expressed in individual B cells.

REFERENCES

1. Winzer, M., Ruppert, M., Baretton, G., Quast, U. and Wolff, H.H. 1992. Bullous poikilodermatitic amyloidosis of the skin with junctional bulla development in IgG light chain plasmacytoma of the λ type. Histology, immunohistology and electron microscopy. Hautarzt 43: 199-204.
2. Claydon, M.A., Gordon, D.B., Garner, G.V. and Lord, G.A. 1996. A partial sequence of spectroscopy. Biochem. Soc. Trans. 23: 633S.
3. Król, M. 2003. Comparison of various implicit solvent models in molecular of immunoglobulin G light chain dimer. J. Comput. Chem. 24: 531-546.
4. Król, M. 2003. Analysis of the effect of electrostatic energy truncation in molecular dynamics simulations of immunoglobulin G light chain dimer. J. Mol. Model. 9: 316-324.
5. Król, M., Roterman, I., Piekarska, B., Konieczny, L., Rybarska, J., Stopa, B. and Spólnik, P. 2005. Analysis of correlated domain motions in IgG light chain of immunological signal transduction. Proteins 59: 545-554.
6. Nakatsuka, A., Maeshima, Y., Sarai, A., Yanai, H., Sugiyama, H., Yamasaki, Y. and Makino, H. 2005. A case of monoclonal immunoglobulin light and heavy chain deposition disease exhibiting atypical deposition with fibrillary structures, successfully treated with chemotherapy. Clin. Nephrol. 64: 221-227.
7. Drayson, M., Begum, G., Basu, S., Makkuni, S., Dunn, J., Barth, N. and Child, J.A. 2006. Effects of paraprotein heavy and light chain types and free light chain load on survival in myeloma: an analysis of patients receiving conventional-dose chemotherapy in Medical Research Council UK multiple myeloma trials. Blood 108: 2013-2019.
8. Giritch, A., Marillonnet, S., Engler, C., van Eldik, G., Botterman, J., Klimyuk, V. and Gleba, Y. 2006. Rapid high-yield expression of full-size IgG antibodies in plants coinfected with noncompeting viral vectors. Proc. Natl. Acad. Sci. USA 103: 14701-14706.
9. Halimi, M., Dayan-Amouyal, Y., Kariv-Inbal, Z., Friedman-Levi, Y., Mayer-Sonnenfeld, T. and Gabizon, R. 2006. Prion urine comprises a glycosaminoglycan-light chain IgG complex that can be stained by Congo red. J. Virol. Methods 133: 205-210.

CHROMOSOMAL LOCATION

Genetic locus: IGKC (human) mapping to 2p12.

SOURCE

Ig κ light chain (mAHuIgk) is a mouse monoclonal antibody raised against purified Ig κ light chain of human origin.

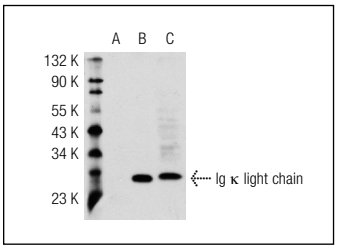
PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Ig κ light chain (mAHuIgk) is recommended for detection of Ig κ light chain of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

DATA



Ig κ light chain (mAHuIgk): sc-73324. Western blot analysis of Ig κ light chain expression in non-transfected 293T: sc-117752 (**A**), human Ig κ light chain transfected 293T: sc-114846 (**B**) and U-698-M (**C**) whole cell lysates.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.