

Rubella Virus gpE1 (5D11): sc-101364

BACKGROUND

The Rubella Virus causes the disease Rubella (also known as epidemic roseola, German measles, liberty measles or three-day measles). It is spread via respiratory transmission from human to human, and the symptoms of the disease are often so mild that an attack can pass unnoticed, making diagnosis difficult. Rubella Virus contains three major structural polypeptides designated E1, E2 and C. E2 consists of three closely related glycopolypeptides, while both E1 and E2 are glycosylated and contain [3H] palmitic acid. Under non-reducing conditions, E1 exists as a disulfide-bonded dimer (E1-E1), a disulfide-bonded heterodimer (E1-E2) and in its monomeric form (E1). E2 is found predominantly in heterodimeric form (E1-E2) and C is found only in dimeric form under non-reducing conditions. A peptide region of E1 (193 to 269) contains hemagglutinin (HA) and virus-neutralizing (VN) epitopes.

REFERENCES

1. Waxham, M.N. and Wolinsky, J.S. 1985. A model of the structural organization of Rubella virions. *Rev. Infect. Dis.* 7: S133-S139.
2. Formg, R.Y. and Frey, T.K. 1995. Identification of the Rubella Virus nonstructural proteins. *Virology* 206: 843-853.
3. Johnstone, P., Whitby, J.E., Bosma, T., Best, J.M. and Sanders, P.G. 1996. Sequence variation in 5' termini of Rubella Virus genomes: changes affecting structure of the 5' proximal stem-loop. *Arch. Virol.* 141: 2471-2477.
4. Cordoba, P., Lanoel, A., Grutadauria, S. and Zapata, M. 2000. Evaluation of antibodies against a Rubella Virus neutralizing domain for determination of immune status. *Clin. Diagn. Lab. Immunol.* 7: 964-966.
5. Liu, X., Yang, J., Ghazi, A.M. and Frey, T.K. 2000. Characterization of the zinc binding activity of the Rubella Virus nonstructural protease. *J. Virol.* 74: 5949-5956.
6. Qiu, Z., Yao, J., Cao, H. and Gillam, S. 2000. Mutations in the E1 hydrophobic domain of Rubella Virus impair virus infectivity but not virus assembly. *J. Virol.* 74: 6637-6642.
7. Risco, C., Carrascosa, J.L. and Frey, T.K. 2003. Structural maturation of Rubella Virus in the Golgi complex. *Virology* 312: 261-269.
8. Law, L.J., Ilkow, C.S., Tzeng, W.P., Rawluk, M., Stuart, D.T., Frey, T.K. and Hobman, T.C. 2006. Analyses of phosphorylation events in the Rubella Virus capsid protein: role in early replication events. *J. Virol.* 80: 6917-6925.
9. Saitoh, M., Shinkawa, N., Shimada, S., Segawa, Y., Sadamasu, K., Kato, M., Hasegawa, M., Kozawa, K., Kuramoto, T., Nishio, O. and Kimura, H. 2006. Phylogenetic analysis of envelope glycoprotein (E1) gene of Rubella Viruses prevalent in Japan in 2004. *Microbiol. Immunol.* 50: 179-185.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

SOURCE

Rubella Virus gpE1 (5D11) is a mouse monoclonal antibody raised against recombinant Rubella Virus gpE1.

PRODUCT

Each vial contains 100 µl ascites containing IgG₁ with < 0.1% sodium azide.

APPLICATIONS

Rubella Virus gpE1 (5D11) is recommended for detection of E1 glycoprotein of Rubella Virus origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:2500) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:100-1:5000); non cross-reactive with other viruses.

Molecular Weight of Rubella Virus gpE1: 58 kDa.

PROTOCOLS

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