SANTA CRUZ BIOTECHNOLOGY, INC.

HSV-2 gB (vN-12): sc-22090

BACKGROUND

Membrane fusion is crucial for the entry, spread and formation of enveloped viruses, such as herpes simplex virus, and is mediated by envelope glycoproteins. Two serotypes of the herpes simplex virus, type-1 HSV-1 (oral) and type-2 HSV-2 (genital), have been shown to encode at least ten glycoproteins, four of which are necessary and sufficient to facilitate fusion. These four glycoproteins include glycoprotein B (gB), glycoprotein D (gD), glycoprotein H(gH) and glycoprotein L (gL). The fusion event is dependent upon the expression of a gD receptor on target cell membranes and does not require the presence of cell-surface glycosaminoglycans. gB is essential for viral growth as gB-free virions are able to bind cells but not to synthesize virus-specific proteins upon infection. HSV-1 gB and HSV-2 gB exist as homodimers which may be linked by disulfide bonds. HSV-1 gB is a 904 amino acid protein with an extracellular domain consisting of amino acids 31-730 and a cytoplasmic domain consisting of amino acids 796-904. HSV-2 gB is also a 904 amino acid protein, with amino acids 23 to 727 making up the extracellular domain and amino acids 793 to 904 making up the cytoplasmic domain.

REFERENCES

1. Cai, W.H., Gu, B. and Person, S. 1988. Role of glycoprotein B of herpes simplex virus type 1 in viral entry and cell fusion. J. Virol. 62: 2596-2604.
2. Slomka, M.J. 1996. Seroepidemiology and control of genital herpes: the value of type specific antibodies to herpes simplex virus. Commun. Dis. Rep. CDR Rev. 6: R41-45.
3. Turner, A., Bruun, B., Minson, T. and Browne, H. 1998. Glycoproteins gB, gD, and gHgL of herpes simplex virus type 1 are necessary and sufficient to mediate membrane fusion in a Cos cell transfection system. J. Virol. 72: 873-875.
4. Muggeridge, M.I. 2000. Characterization of cell-cell fusion mediated by herpes simplex virus 2 glycoproteins gB, gD, gH and gL in transfected cells. J. Gen. Virol. 81: 2017-2027.
5. Rodger, G., Boname, J., Bell, S. and Minson, T. 2001. Assembly and organization of glycoproteins B, C, D, and H in herpes simplex virus type 1 particles lacking individual glycoproteins: No evidence for the formation of a complex of these molecules. J. Virol. 75: 710-716.
6. Browne, H., Bruun, B. and Minson, T. 2001. Plasma membrane requirements for cell fusion induced by herpes simplex virus type 1 glycoproteins gB, gD, gH and gL. J. Gen. Virol. 82: 1419-1422.

SOURCE

HSV-2 gB (vN-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of HSV-2 gB.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22090 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HSV-2 gB (vN-12) is recommended for detection of HSV-2 gB of HSV-2 origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of HSV-2 gB: 113 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

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 or our catalog for detailed protocols and support products.