SANTA CRUZ BIOTECHNOLOGY, INC.

syncytin (H-280): sc-50369

BACKGROUND

Syncytin, also known as ERVWE1 (endogenous retroviral family W, env(C7), member 1) is a human endogenous retrovirus family W (HERV-W) envelope protein that is expressed in placental syncytiotrophoblast and is involved in fusion of the cytotrophoblast cells to form the multinucleated syncytial layer of the placenta. Syncytin is an envelope protein after *in vitro* transcription-translation and undergoes glycosylation. It is predicted to undergo post-translational cleavage into a surface (SU) subunit and a transmembrane (TM) subunit. Syncytin is similar to other retroviral envelope proteins in possessing a furin cleavage site that separates the surface (SU) and transmembrane (TM) proteins, which form a heterodimer. Northern blot analysis has been shown to detect 8.0-, 3.1-, and 1.3-kb HERV-W transcripts only in placenta. Syncytin expression can increase three-fold in astrocytes and glial cells within acute demyelinating lesions of patients with multiple sclerosis compared to controls.

REFERENCES

1. Blond, J.L., et al. 1999. Molecular characterization and placental expression of HERV-W, a new human endogenous retrovirus family. J. Virol. 73: 1175-1185.
2. Mi, S., et al. 2000. Syncytin is a captive retroviral envelope protein involved in human placental morphogenesis. Nature 403: 785-789.
3. Lee, X., et al. 2001. Downregulation of placental syncytin expression and abnormal protein localization in pre-eclampsia. Placenta 22: 808-812.
4. Keith, J.C., Jr., et al. 2002. Placental syncytin expression in normal and preeclamptic pregnancies. Am. J. Obstet. Gynecol. 187: 1122-1123
5. Smallwood, A., et al. 2003. Temporal regulation of the expression of syncytin (HERV-W), maternally imprinted PEG10, and SGCE in human placenta. Biol. Reprod. 69: 286-293.
6. Chang, C., et al. 2004. Functional characterization of the placental fusogenic membrane protein syncytin. Biol. Reprod. 71: 1956-1962.

CHROMOSOMAL LOCATION

Genetic locus: ERVWE1 (human) mapping to 7q21.2.

SOURCE

syncytin (H-280) is a rabbit polyclonal antibody raised against amino acids 33-312 mapping near the N-terminus of syncytin of human origin.

PRODUCT

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

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.

APPLICATIONS

syncytin (H-280) is recommended for detection of syncytin 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for syncytin siRNA (h): sc-60054, syncytin shRNA Plasmid (h): sc-60054-SH and syncytin shRNA (h) Lentiviral Particles: sc-60054-V.

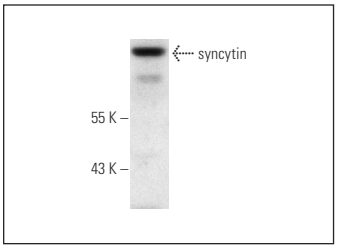
Molecular Weight of glycosylated syncytin: 60/80 kDa.

Positive Controls: DU 145 cell lysate: sc-2268.

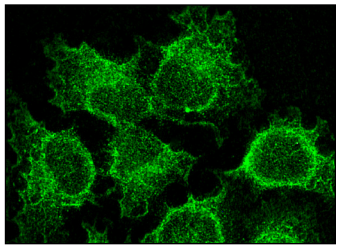
RECOMMENDED SECONDARY REAGENTS

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™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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. 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™ Mounting Medium: sc-24941.

DATA



syncytin (H-280): sc-50369. Western blot analysis of syncytin expression in DU 145 whole cell lysate.



syncytin (H-280): sc-50369. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Huang, F.D., et al. 2008. Regulation of protein expression and function of OCTN2 in Forskolin-induced syncytialization in BeWo cells. Placenta 30: 187-194.
2. Holder, B.S., et al. 2012. Syncytin 1 in the human placenta. Placenta 33: 460-466.
3. Holder, B.S, et al. 2012. Immune cell activation by trophoblast-derived microvesicles is mediated by syncytin 1. Immunology 136: 184-191.

PROTOCOLS

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