

Human SOS1 knockout A-431 cell line ab276087

2 Images

Overview

Product name	Human SOS1 knockout A-431 cell line
Parental Cell Line	A431
Organism	Human
Passage number	<20
Knockout validation	Western Blot (WB)
Tested applications	Suitable for: WB
Biosafety level	1
General notes	<p>Recommended control: Human wild-type A-431 cell line (ab275462). Please note a wild-type cell line is not automatically included with a knockout cell line order, if required please add recommended wild-type cell line at no additional cost using the code WILDTYPE-TMTK1.</p> <p>Cryopreservation cell medium: Cell Freezing Medium-DMSO Serum free media, contains 8.7% DMSO in MEM supplemented with methyl cellulose.</p> <p>Culture medium: DMEM (High Glucose) + 10% FBS</p> <p>Initial handling guidelines: Upon arrival, the vial should be stored in liquid nitrogen vapor phase and not at -80°C. Storage at -80°C may result in loss of viability.</p> <ol style="list-style-type: none"> 1. Thaw the vial in 37°C water bath for approximately 1-2 minutes. 2. Transfer the cell suspension (0.8 mL) to a 15 mL/50 mL conical sterile polypropylene centrifuge tube containing 8.4 mL pre-warmed culture medium, wash vial with an additional 0.8 mL culture medium (total volume 10 mL) to collect remaining cells, and centrifuge at 201 x g (rcf) for 5 minutes at room temperature. 10 mL represents minimum recommended dilution. 20 mL represents maximum recommended dilution. 3. Resuspend the cell pellet in 5 mL pre-warmed culture medium and count using a haemocytometer or alternative cell counting method. Based on cell count, seed cells in an appropriate cell culture flask at a density of 2×10^4 cells/cm². Seeding density is given as a guide only and should be scaled to align with individual lab schedules. 4. Incubate the culture at 37°C incubator with 5% CO₂. Cultures should be monitored daily. <p>Subculture guidelines:</p> <p>All seeding densities should be based on cell counts gained by established methods. A guide seeding density of 2×10^4 cells/cm² is recommended.</p> <p>A partial media change 24 hours prior to subculture may be helpful to encourage growth, if required.</p> <p>Cells should be passaged when they have achieved 80-90% confluence.</p>

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We will provide viable cells that proliferate on revival.

Properties

Number of cells	1 x 10 ⁶ cells/vial, 1 mL
Adherent /Suspension	Adherent
Tissue	Skin
Cell type	epithelial
Disease	Epidermoid Carcinoma
Gender	Female
Mycoplasma free	Yes
Storage instructions	Shipped on Dry Ice. Store in liquid nitrogen.
Storage buffer	Constituents: 8.7% Dimethylsulfoxide, 2% Cellulose, methyl ether

Target

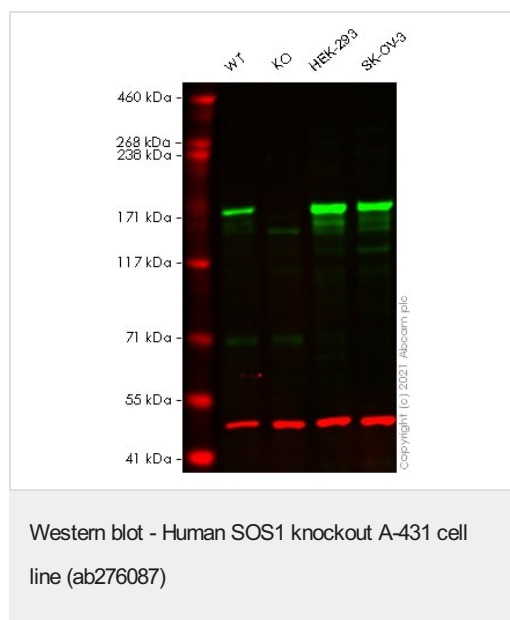
Function	Promotes the exchange of Ras-bound GDP by GTP.
Tissue specificity	Expressed in gingival tissues.
Involvement in disease	<p>Defects in SOS1 are the cause of gingival fibromatosis 1 (GGF1) [MIM:135300]; also known as GINGF1. Gingival fibromatosis is a rare overgrowth condition characterized by a benign, slowly progressive, nonhemorrhagic, fibrous enlargement of maxillary and mandibular keratinized gingiva. GGF1 is usually transmitted as an autosomal dominant trait, although sporadic cases are common.</p> <p>Defects in SOS1 are the cause of Noonan syndrome type 4 (NS4) [MIM:610733]. NS4 is an autosomal dominant disorder characterized by dysmorphic facial features, short stature, hypertelorism, cardiac anomalies, deafness, motor delay, and a bleeding diathesis. It is a genetically heterogeneous and relatively common syndrome, with an estimated incidence of 1 in 1000-2500 live births. Rarely, NS4 is associated with juvenile myelomonocytic leukemia (JMML). SOS1 mutations engender a high prevalence of pulmonary valve disease; atrial septal defects are less common.</p>
Sequence similarities	<p>Contains 1 DH (DBL-homology) domain.</p> <p>Contains 1 N-terminal Ras-GEF domain.</p> <p>Contains 1 PH domain.</p> <p>Contains 1 Ras-GEF domain.</p>

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab276087 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration.

Images



All lanes : Anti-SOS1 antibody [EPR7480] ([ab140621](#)) at 1/1000 dilution

Lane 1 : Wild-type A431 cell lysate

Lane 2 : SOS1 knockout A431 cell lysate

Lane 3 : HEK-293 cell lysate

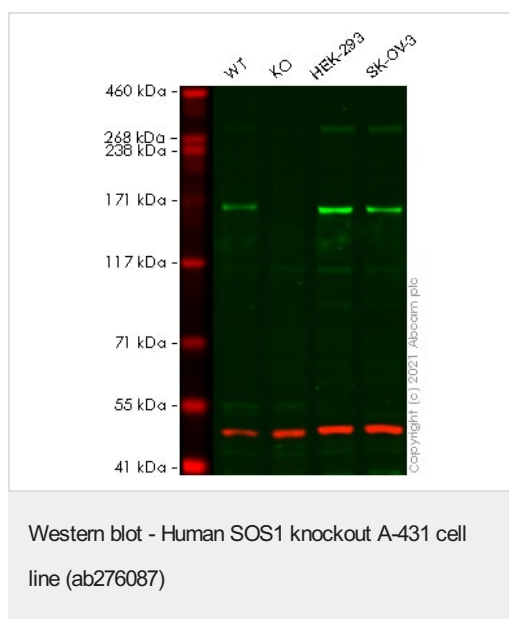
Lane 4 : SK-OV-3 cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Observed band size: 171 kDa

False colour image of Western blot: Anti-SOS1 antibody [EPR7480] staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] ([ab7291](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, [ab140621](#) was shown to bind specifically to SOS1. A band was observed at 171 kDa in wild-type A431 cell lysates with no signal observed at this size in SOS1 knockout cell line ab276087 (knockout cell lysate [ab283833](#)). To generate this image, wild-type and SOS1 knockout A431 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween[®] 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye[®] 800CW) preabsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye[®] 680RD) preabsorbed ([ab216776](#)) at 1/20000 dilution.



All lanes : Anti-SOS1 antibody ([ab245645](#)) at 1/2000 dilution

Lane 1 : Wild-type A431 cell lysate

Lane 2 : SOS1 knockout A431 cell lysate

Lane 3 : HEK-293 cell lysate

Lane 4 : SK-OV-3 cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

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False colour image of Western blot: Anti-SOS1 antibody staining at 1/2000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] ([ab7291](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, [ab245645](#) was shown to bind specifically to SOS1. A band was observed at 171 kDa in wild-type A431 cell lysates with no signal observed at this size in SOS1 knockout cell line ab276087 (knockout cell lysate [ab283833](#)). To generate this image, wild-type and SOS1 knockout A431 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween[®] 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye[®] 800CW) preabsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye[®] 680RD) preabsorbed ([ab216776](#)) at 1/20000 dilution.

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