

# Human NIS antibody SJ1

## Product Description

Product Name: Human NIS antibody SJ1  
Catalog Number: REA004  
Lot Number: REA-IM01  
Unit Size: 250 µL  
Species: Rabbit  
Antigen: Human sodium iodide symporter (hNIS)-MBP  
Isotype: Polyclonal  
Reactivity: Human, Rhesus

This is a rabbit polyclonal antibody directed against the human sodium iodide symporter (hNIS). The antibody was raised against a fusion protein consisting of the C-terminal portion of hNIS and MBP<sup>6</sup>. The epitope recognized by the antibody is the C-terminal portion of hNIS (residues 468-643). This antibody detects both the native and denatured forms of NIS. The antibody does not cross react with mouse NIS.

## Storage Instructions

This antibody can be stored short term (1-2 weeks) at 2-6°C. For longer term storage, aliquot and store at or below -20°C. Avoid repeated freeze/thaw cycles.

## Recommended Uses

The human NIS antibody SJ1 is suitable for multiple applications, including:

- Flow cytometry (1:2000-1:3000 dilution)
- Immunofluorescence (1:500-1:3000 dilution)
- Immunohistochemistry (1:2000-1:5000 dilution)
- Immunoblot (1:3000-1:5000 dilution)

## Recommended Controls

Cells or lysates prepared from cells expressing human NIS should be used as a positive control. For best immunoblot results, lysates should be prepared from cells transduced with lentivirus encoding human NIS (Imanis #LV001 or LV002) or stably expressing high-levels of human NIS (Imanis #CL001). Normal human thyroid tissue can be used as a positive control for immunohistochemistry.

## Recommended Protocol: Protein Extraction

To prepare membrane protein fractions, harvest and homogenize cells at 4°C in homogenizing buffer (10 mM Tris-HCl, pH7.5, 5 mM NaCl, 1 mM EDTA, 0.25 M sucrose, and 1X protease inhibitor). Clarify lysates at 700 x g for 10 min (4°C). Centrifuge the recovered supernatant at 200,000 x g for 1 h (4°C). Resuspend the pellet in homogenizing buffer and store at -70°C.

To prepare total protein fractions, lyse cells in RIPA buffer containing 1X protease inhibitors. Incubate on ice for 30 min then clarify at 8000 x g for 15 min (4°C). Store at -70°C.

## Product Citations:

- <sup>1</sup>Lakshmanan et al. *Thyroid*. 2014. 24:878-887.
- <sup>2</sup>Knostman et al. *BMC Cancer*. 2007. 7:137.
- <sup>3</sup>Marsee et al. *Thyroid*. 2005. 15:977-987.
- <sup>4</sup>Jhiang et al. *J Clin Endocrinol Metab*. 2000. 85:2364-2365.
- <sup>5</sup>Castro et al. *J Endocrinol*. 1999. 163:495-504.
- <sup>6</sup>Jhiang et al. *Endocrinology*. 1998. 139:4416-4419.

Quality Control by: LS

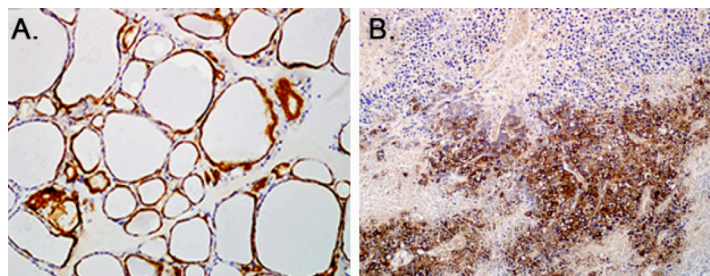
Quality Assurance by: RLV

Effective Date: 20-Apr-2016

## Certificate of Analysis

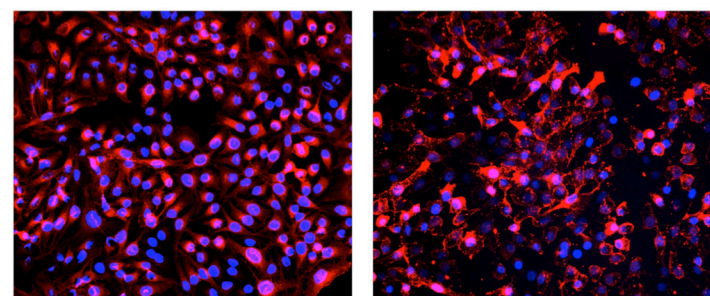
Testing performed by Imanis Life Sciences

## Immunohistochemistry



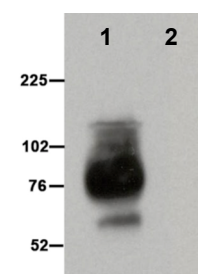
Paraffin embedded sections of human thyroid (A) or VSV-mIFN $\beta$ -NIS-treated mouse tumor xenograft (B) after antigen retrieval with citrate pH 6 were stained with human NIS antibody SJ1 (1:2000 dilution). Counterstain is hematoxylin.

## Immunofluorescence



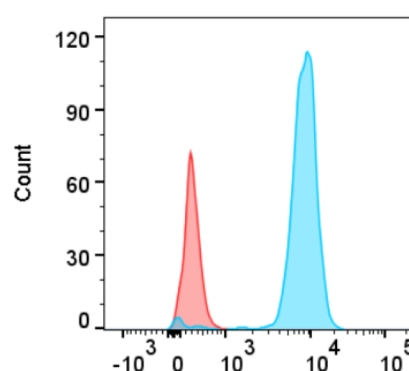
Permeabilized (left) or intact (right) Mel624-hNIS-Neo cells, which stably express hNIS, were stained with human NIS antibody SJ1 (1:500 dilution) followed by an Alexa Fluor 594-conjugated anti-rabbit secondary antibody and Hoechst 33342 to stain nuclei. Cell photos were taken at 200X magnification.

## Immunoblot Analysis



Membrane protein extracted from Mel624-hNIS-Neo cells (lane 1), which stably express human NIS, or CT26.WT-mNIS cells (lane 2), which stably express mouse NIS was subjected to SDS-PAGE and transferred to a nitrocellulose membrane for immunoblot analysis using human NIS antibody SJ1 (1:2000 dilution) and HRP-conjugated anti-rabbit secondary antibody. The top band (~75-90 kDa) represents the hyperglycosylated form of NIS, while the bottom band (~60-65 kDa) represents the hypoglycosylated form of NIS.

## Flow Cytometry



Human thyroid cells, SW579 were fixed with paraformaldehyde and stained with human NIS antibody SJ1 (1:2000 dilution) followed by an Alexa Fluor 594-conjugated anti-rabbit secondary antibody. Stained (blue) and unstained control (red) cells were subjected to flow cytometry analysis.

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