

## Anti-SA2/STAG2 Antibody Picoband®

Catalog Number: A03624-1

### About STAG2

Cohesin subunit SA-2 (SA2) is a protein that in humans is encoded by the STAG2 gene. The protein encoded by this gene is a subunit of the cohesin complex, which regulates the separation of sister chromatids during cell division. Targeted inactivation of this gene results in chromatid cohesion defects and aneuploidy, suggesting that genetic disruption of cohesin is a cause of aneuploidy in human cancer. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.

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### Overview

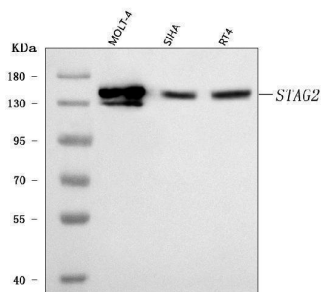
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|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name         | Anti-SA2/STAG2 Antibody Picoband®                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Reactive Species     | Human, Mouse, Rat                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Description          | Boster Bio Anti-SA2/STAG2 Antibody Picoband® catalog # A03624-1. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance. |
| Application          | ELISA, Flow Cytometry, IF, IHC, ICC, WB                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Clonality            | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Formulation          | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .                                                                                                                                                                                                                                                                                                                                                                       |
| Storage Instructions | At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.                                                                                                                                                                                                                                                               |
| Host                 | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Uniprot ID           | Q8N3U4                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

### Technical Details

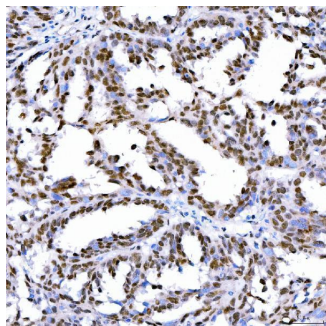
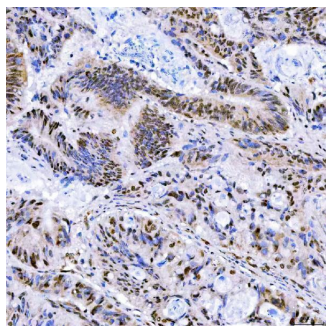
|                               |                                                                                                                                                                                          |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Immunogen                     | E.coli-derived human SA2/STAG2 recombinant protein (Position: E750-M1175).                                                                                                               |
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC. |

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cross Reactivity    | No cross-reactivity with other proteins.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Isotype             | Rabbit IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Form                | Lyophilized                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Concentration       | Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.                                                                                                                                                                                                                                                                                                                                                                                      |
| Purification        | Immunogen affinity purified.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Suggested Dilutions | <p>Western blot, 0.25-0.5 ug/ml, Human<br/> Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human<br/> Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human<br/> Immunofluorescence, 5 ug/ml, Human<br/> Flow Cytometry (Fixed), 1-3 ug/1x10<sup>6</sup> cells, Human<br/> ELISA, 0.1-0.5 ug/ml, -</p> <p>Note: For flow cytometry (FCM), validated for fixed cells only. Not validated for FACS or surface flow cytometry using live cells.</p> |

## Anti-SA2/STAG2 Antibody Picoband® (A03624-1) Images

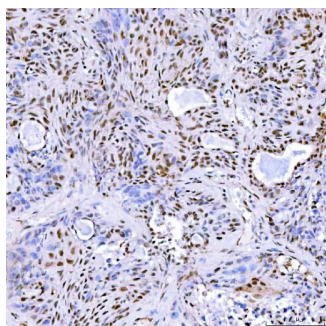


Western blot analysis of SA2/STAG2 using anti-SA2/STAG2 antibody (A03624-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human MOLT-4 whole cell lysates, Lane 2: human SiHa whole cell lysates, Lane 3: human RT4 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SA2/STAG2 antigen affinity purified polyclonal antibody (Catalog # A03624-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for SA2/STAG2 at approximately 141 kDa. The expected band size for SA2/STAG2 is at 141 kDa.

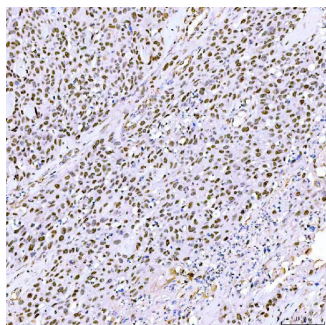


IHC analysis of STAG2 using anti-STAG2 antibody (A03624-1). STAG2 was detected in a paraffin-embedded section of human ovarian cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-STAG2 Antibody (A03624-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

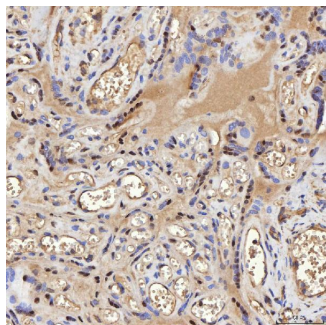
IHC analysis of STAG2 using anti-STAG2 antibody (A03624-1). STAG2 was detected in a paraffin-embedded section of human lung squamous cell carcinoma tissue. Heat



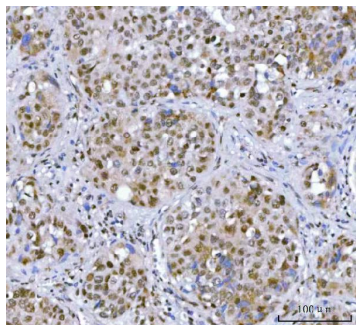
mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-STAG2 Antibody (A03624-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of STAG2 using anti-STAG2 antibody (A03624-1). STAG2 was detected in a paraffin-embedded section of human penis squamous cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-STAG2 Antibody (A03624-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

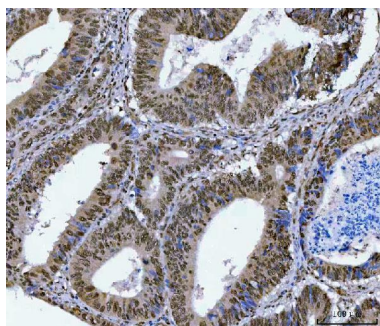


IHC analysis of STAG2 using anti-STAG2 antibody (A03624-1). STAG2 was detected in a paraffin-embedded section of human placenta tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-STAG2 Antibody (A03624-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

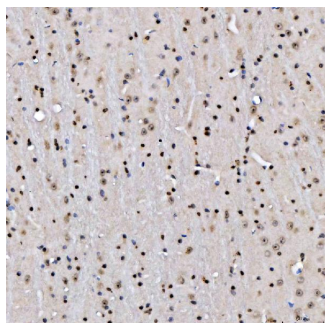


IHC analysis of STAG2 using anti-STAG2 antibody (A03624-1). STAG2 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-STAG2 Antibody (A03624-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

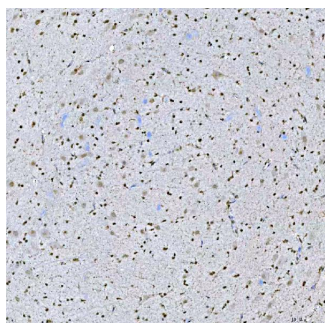
IHC analysis of STAG2 using anti-STAG2 antibody (A03624-1). STAG2 was detected in a paraffin-embedded section of human colon cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked



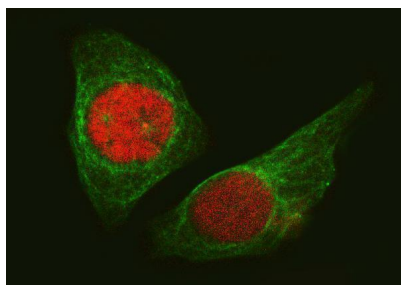
with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-STAG2 Antibody (A03624-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of STAG2 using anti-STAG2 antibody (A03624-1). STAG2 was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-STAG2 Antibody (A03624-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

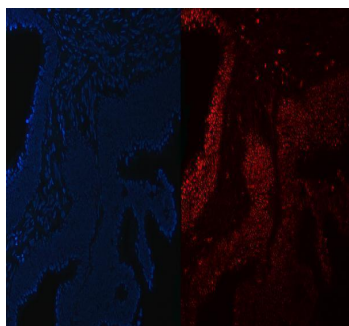


IHC analysis of STAG2 using anti-STAG2 antibody (A03624-1). STAG2 was detected in a paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-STAG2 Antibody (A03624-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

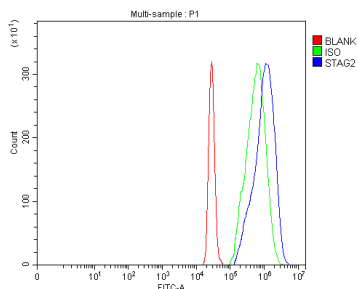


IF analysis of STAG2 using anti-STAG2 antibody (A03624-1) and anti-Tubulin Alpha antibody (M03989-3). STAG2 was detected in immunocytochemical section of SiHa cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-STAG2 Antibody (A03624-1) and mouse anti-Tubulin Alpha antibody (M03989-3) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) and DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

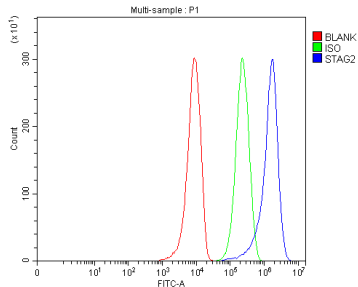
IF analysis of STAG2 using anti-STAG2 antibody (A03624-1). STAG2 was detected in a paraffin-embedded section of human colon cancer tissue. Heat mediated antigen retrieval



was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/mL rabbit anti-STAG2 Antibody (A03624-1) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of U937 cells using anti-STAG2 antibody (A03624-1). Overlay histogram showing U937 cells stained with A03624-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-STAG2 Antibody (A03624-1, 1 ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Flow Cytometry analysis of 293T cells using anti-STAG2 antibody (A03624-1). Overlay histogram showing 293T cells stained with A03624-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-STAG2 Antibody (A03624-1, 1 ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

### Anti-SA2/STAG2 Antibody

For Research Use Only. Not for use in diagnostic procedures.