# Product Datasheet

## LIF Antibody (39N7D10) - BSA Free
## NBP2-27406

Unit Size: 0.1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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**Reviews: 1 Publications: 4**

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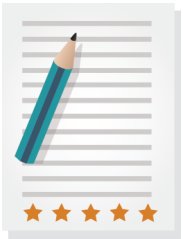
www.novusbio.com/NBP2-27406

Updated 10/27/2024 v.20.1





# NBP2-27406

LIF Antibody (39N7D10) - BSA Free

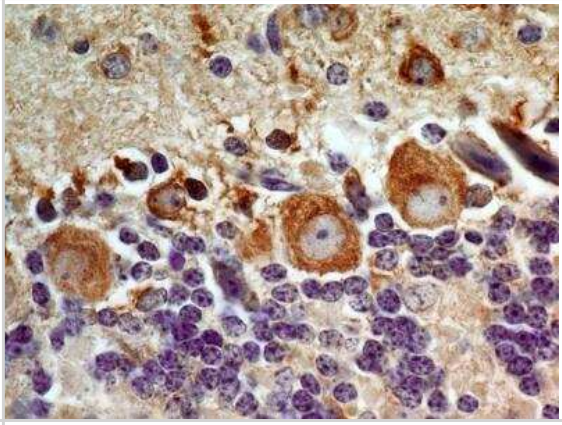
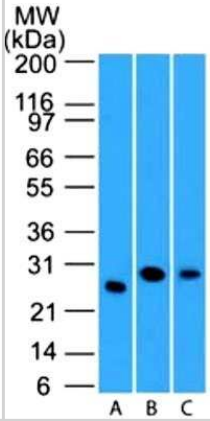
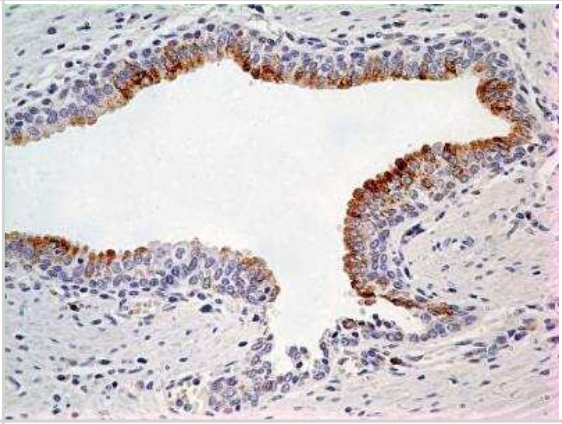
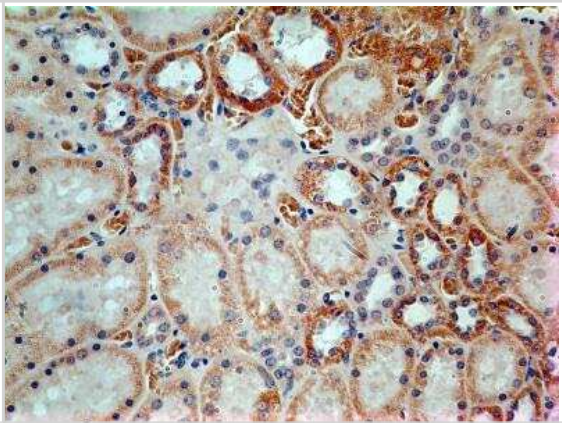
| Product Information | |
|---|---|
| **Unit Size** | 0.1 mg |
| **Concentration** | 1.0 mg/ml |
| **Storage** | Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles. |
| **Clonality** | Monoclonal |
| **Clone** | 39N7D10 |
| **Preservative** | 0.02% Sodium Azide |
| **Isotype** | IgG2b Kappa |
| **Purity** | Protein G purified |
| **Buffer** | PBS |

| Product Description | |
|---|---|
| **Host** | Rat |
| **Gene ID** | 3976 |
| **Gene Symbol** | LIF |
| **Species** | Human, Mouse |
| **Immunogen** | A recombinant murine Lif protein containing amino acids 24-203 was used as the immunogen for this antibody. |

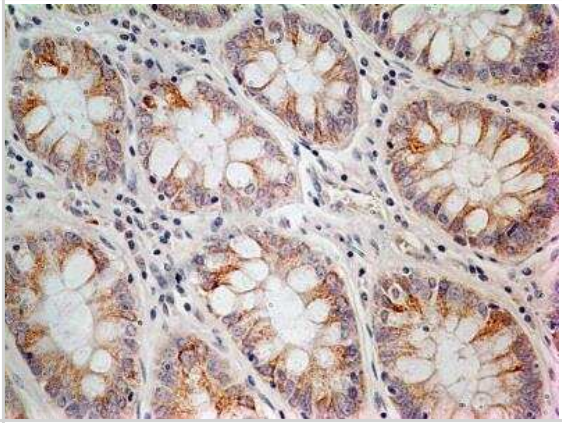
| Product Application Details | |
|---|---|
| **Applications** | Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin |
| **Recommended Dilutions** | Western Blot 3-5ug/ml~, Immunohistochemistry 1:200, Immunocytochemistry/ Immunofluorescence 2 ug/ml, Immunohistochemistry-Paraffin 1:200 |
| **Application Notes** | The LIF protein can be highly glycosylated and has been observed between 22-34 in Western Blotting. Staining in IHC-P is enhanced through antigen retrieval using 10 mM Sodium Citrate buffer, pH 6.0. |

## Images

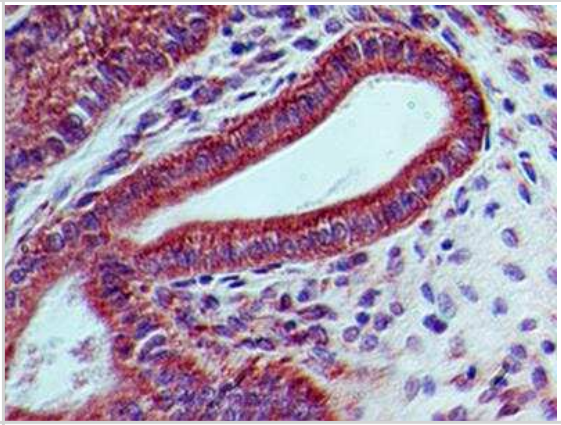
Western Blot: LIF Antibody (39N7D10) [NBP2-27406] - LIF expression in human primary T-cells and cancer cell lines: Jurkat and K562. Image from verified customer review.

| | |
|---|---|
| Immunohistochemistry-Paraffin: LIF Antibody (39N7D10) [NBP2-27406] - Tissue section of mouse brain using 5 ug/ml concentration of LIF antibody (clone 39N7D10). |  |
| Western Blot: LIF Antibody (39N7D10) [NBP2-27406] - WB validation of LIF antibody (clone 39N7D10) on (A) full-length recombinant Lif protein, (B) mouse spleen lysate and (C) human spleen lysate. 3 ug/mL concentration of primary antibody, Goat anti-rat IgG HRP secondary antibody and PicoTect ECL substrate solution were used for this assay. |  |
| Immunohistochemistry-Paraffin: LIF Antibody (39N7D10) [NBP2-27406] - Tissue section of normal human prostate using 5 ug/ml concentration of LIF antibody (clone 39N7D10). Cell surface/membrane- cytoplasmic immunepositivity of LIF was observed specifically in the epithelial cells of prostate alveolar glands, whereas the surrounding fibromuscular stroma cells did not develop any staining. |  |
| Immunohistochemistry-Paraffin: LIF Antibody (39N7D10) [NBP2-27406] - Tissue section of normal human kidney using 5 ug/ml concentration of LIF antibody (clone 39N7D10). Expected membrane- cytoplasmic immunepositivity of LIF was observed in the cuboidal epithelial cells of renal tubules. |  |

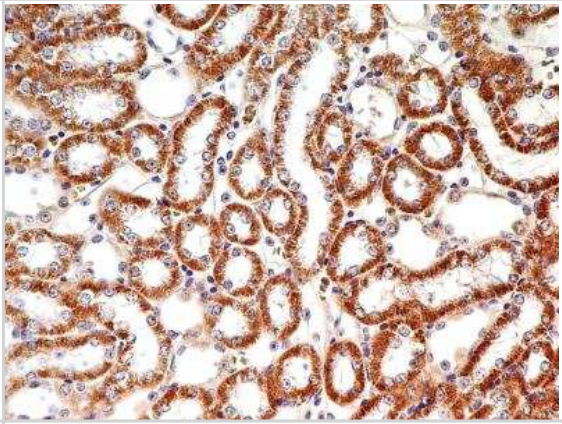
Immunohistochemistry-Paraffin: LIF Antibody (39N7D10) [NBP2-27406] - Tissue section of adenocarcinoma of human rectum using 5 ug/ml concentration of LIF antibody (clone 39N7D10). The cancer cells as well as the goblet cells in the rectal glands depicted membrane-cytoplasmic immunostaining of LIF protein.



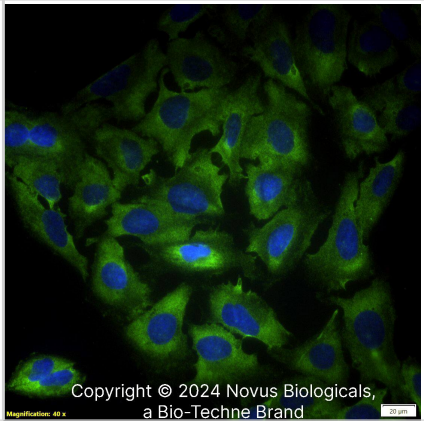
Immunohistochemistry-Paraffin: LIF Antibody (39N7D10) [NBP2-27406] - Tissue section of mouse colon using 5 ug/ml concentration of LIF antibody (clone 39N7D10). The columnar epithelial cells of the crypts developed intense membrane-cytoplasmic LIF immunostaining. Additionally, some cells in the lamina propria and the sub-mucosal layer also depicted weak positivity for LIF staining.



Immunohistochemistry-Paraffin: LIF Antibody (39N7D10) [NBP2-27406] - Tissue section of mouse kidney using 5 ug/ml concentration of LIF antibody (clone 39N7D10). Very intense immune positivity of LIF was observed in membranes as well as the cytoplasm of cuboidal epithelial cells of renal tubules.



LIF (39N7D10) was detected in immersion fixed U-2 OS human osteosarcoma cell line using Rat anti-LIF (39N7D10) Protein G-purified Recombinant Monoclonal Antibody (Catalog # NBP2-27406) at 1.0 µg/mL overnight at 4C. Cells were stained using DyLight 488-conjugated Anti-Rat IgG (H+L) Cross-Absorbed Secondary Antibody (green), and counterstained with DAPI (blue). Cells were imaged using a 40X objective.



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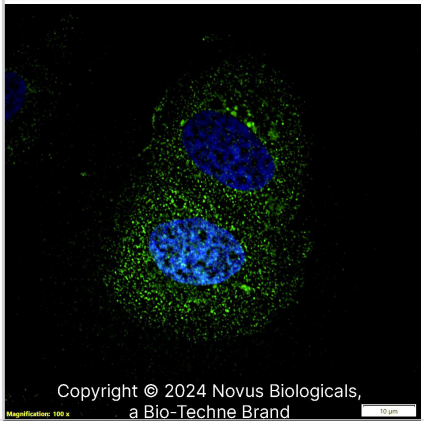


## Publications

Kakae, M;Nakajima, H;Tobori, S;Kawashita, A;Miyanohara, J;Morishima, M;Nagayasu, K;Nakagawa, T;Shigetomi, E;Koizumi, S;Mori, Y;Kaneko, S;Shirakawa, H; The astrocytic TRPA1 channel mediates an intrinsic protective response to vascular cognitive impairment via LIF production Science advances 2023-07-21 [PMID: 37478173]

Yue X, Wang J, Chang CY et al. Leukemia inhibitory factor drives glucose metabolic reprogramming to promote breast tumorigenesis Cell death & disease [PMID: 35440095] (IF/IHC, Human)

Wang H, Si S, Jiang M Et Al. Leukemia inhibitory factor is involved in the pathogenesis of NSCLC through activation of the STAT3 signaling pathway Oncology Letters 2021-07-14 [PMID: 34386085] (WB, IHC-P)

Wang H, Wang J, Zhao Y et al. LIF is essential for ISC function and protects against radiation-induced gastrointestinal syndrome Cell Death Dis 2020-07-27 [PMID: 32719388] (IHC-P, ICC/IF, Human)

## Procedures

**Western Blot Protocol for LIF Antibody (NBP2-27406)**
Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 10-25 ug of total protein per lane.
2. Transfer proteins to PVDF membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain the membrane with Ponceau S (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot TBS -0.05% Tween 20 (TBST).
5. Block the membrane in 5% Non-fat milk in TBST (blocking buffer) for at least 1 hour.
6. Wash the membrane in TBST three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate overnight at 4C with gentle rocking.
8. Wash the membrane in TBST three times for 10 minutes each.
9. Incubate the membrane in diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) for 1 hour at room temperature.
10. Wash the blot in TBST three times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturer's instructions.

**Immunocytochemistry/ Immunofluorescence Protocol for LIF Antibody (NBP2-27406)**
Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and wash the cells briefly in PBS. Add 10% formalin to the dish and fix at room temperature for 10 minutes.
2. Remove the formalin and wash the cells in PBS.
3. Permeablize the cells with 0.1% Triton X100 or other suitable detergent for 10 min.
4. Remove the permeablization buffer and wash three times for 10 minutes each in PBS. Be sure to not let the specimen dry out.
5. To block nonspecific antibody binding, incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
6. Add primary antibody at appropriate dilution and incubate overnight at 4C.
7. Remove primary antibody and replace with PBS. Wash three times for 10 minutes each.
8. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
9. Remove secondary antibody and replace with PBS. Wash three times for 10 minutes each.
10. Counter stain DNA with DAPi if required.

**Immunohistochemistry-Paraffin Protocol for LIF Antibody (NBP2-27406)**
Immunohistochemistry-Paraffin Embedded Sections

Antigen Unmasking:
Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes (keep slides in the sodium citrate buffer at all times).

Staining:
1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in PBS for 5 minutes.
3. Block each section with 100-400 ul blocking solution (1% BSA in PBS) for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4 C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul HRP polymer conjugated secondary antibody. Incubate 30 minutes at room temperature.
7. Wash sections three times in wash buffer for 5 minutes each.
8. Add 100-400 ul DAB substrate to each section and monitor staining closely.
9. As soon as the sections develop, immerse slides in deionized water.
10. Counterstain sections in hematoxylin.
11. Wash sections in deionized water two times for 5 minutes each.
12. Dehydrate sections.
13. Mount coverslips.

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## Products Related to NBP2-27406

| | |
|---|---|
| HAF005 | Goat anti-Rat IgG Secondary Antibody [HRP] |
| F0105B | Goat anti-Rat IgG Secondary Antibody [Phycoerythrin] |
| NBP1-43323-0.5mg | Rat IgG2b Kappa Light Chain Isotype Control (149/10H5) |
| NBP2-27406B | LIF Antibody (39N7D10) [Biotin] |

### Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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