

Human STAT1 Ready-To-Use IHC Kit

Cat.No: IHC0222H
Applications: **IHC-P**
Reactivity: Human
Size: 50T
Assay type: Immunohistochemistry
Sample type: FFPE tissue
General Information:

| Number | Component | Size | Concentration | Storage |
|--------|---|---------|---------------|---------------------------|
| 1 | PBS Buffer (powder) | 2 L×2 | 20x | RT |
| 2 | Antigen Retrieval Buffer | 20 ml | 100x | 2-8°C |
| 3 | Endogenous Peroxidase Blocking Buffer | 3 ml | RTU | 2-8°C, protect from light |
| 4 | Blocking Buffer | 3 ml | RTU | 2-8°C |
| 5 | Primary Antibody (Human STAT1 Recombinant Rabbit mAb) | 6 ml | RTU | 2-8°C |
| 6 | Secondary Antibody (Goat Anti-Rabbit IgG H&L / HRP) | 6 ml | RTU | 2-8°C |
| 7 | Chromogen Component A | 0.3 ml | RTU | -20°C, protect from light |
| 8 | Chromogen Component B | 0.3 ml | RTU | -20°C |
| 9 | Counter Staining Reagent | 5 ml | RTU | RT |
| 10 | Mounting Media | 5 ml | RTU | RT |
| 11 | Control slide (Human colon cancer) | 1 slide | RTU | RT |
| 12 | Datasheet | 1 copy | | |

Storage and Stability: Please store components at the temperatures indicated on the individual tube labels. The kit is stable for 6 months from the date of receipt.

Immunohistochemistry Protocol:

1. Deparaffinization And Rehydration

Immerse slides in fresh xylene for 15 minutes and then repeat two more times using separate containers. Immerse slides sequentially in 100%, 95%, 90%, 80%, and 70% ethanol solutions for 5 minutes each. Rinse slides 3 times with distilled water for 5 minutes each.

2. Antigen Retrieval

Add 100× **Antigen Retrieval Buffer** into distilled water to prepare a 1× solution. Boil slides in 1× solution at 95°C-100°C for 15 minutes. Move the slides to 1× solution at room temperature (RT) and allow them to stand for 20 minutes. Rinse 3 times with **PBS Buffer** (dissolve the powder in 2L distilled water) for 5 minutes each.

3. **Block Endogenous Peroxidase**

Drain the liquid off the slides and then use a hydrophobic IHC pen to draw circles on the slides around tissue sections. Add 2-4 drops of **Endogenous Peroxidase Blocking Buffer** directly on slides, covering the whole tissue and block slides for 15 minutes at RT. Rinse 3 times with **PBS Buffer** for 5 minutes each.

4. **Serum Blocking**

Block with 2-4 drops of **Blocking Buffer** for 20 minutes at RT.

5. **Primary Antibody Incubation**

Drain blocking buffer from slides. Incubate slides with 2-4 drops of **Human STAT1 Recombinant Rabbit mAb** overnight at 4°C or 1-2 hours at RT. Rinse 3 times with **PBS Buffer** for 5 minutes each.

6. **Secondary Antibody Incubation**

Incubate slides with 2-4 drops of **Goat Anti-Rabbit IgG H&L / HRP** for 1-2 hours at RT. Rinse slides 3 times with **PBS Buffer** for 5 minutes each.

7. **Signal Development**

Remove residual liquid around the tissue section. Add 50ul fresh **DAB Buffer (Chromogen Component A : Chromogen Component B : PBS Buffer=1:1:18)** to cover the tissue. Monitor the reaction under the microscope until a brown color is visible (approximate 3-5 minutes at RT). Stop reaction immediately by rinsing with distilled water. Rinse slides 3 times with distilled water for 5 minutes each.

8. **Counterstain**

Counterstain with an appropriate amount of **Counter Staining Reagent** for 3-5 minutes at RT. Rinse slides with distilled water for 5 minutes. Use 2-4 drops of **Differentiation reagent** to cover the tissue for 30 seconds. Rinse slides twice with distilled water for 5 minutes each.

9. **Dehydration Sheet**

Immerse slides sequentially in 70%, 80%, 90%, 95%, and 100% ethanol for 5 minutes each at RT. Immerse slides in 2 changes of fresh xylene, 15 minutes each. Drop some **Mounting Media** on the tissue. Mount coverslips.

Notes:

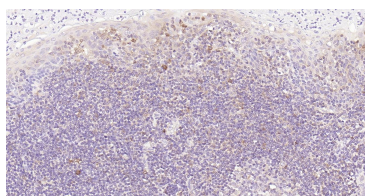
1. The positive control slide provided in the kit allows you to be sure that the experimental set-up is working properly.
2. Do not allow slides to dry at any time during this procedure.

3. Please don't replace the matching reagents in this product with other manufacturers' products.
4. As DAB is a carcinogen, please take necessary precautions.
5. PBS (reagent 1) can be stored for one week at 4°C after preparation; The antigen retrieval buffer (1× reagent 2) and the chromogenic agent (the mixture of reagents 7 and 8) should be prepared right before each assay.

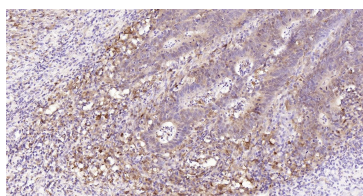
Please cite this product as "IHC0222H, Bioss Antibodies". Citation example: "Human Tissue sections using STAT1 IHC Kit (IHC0222H, Bioss Antibodies) were stained for STAT1 according to the manufacturer's instructions."

Introduction: STAT1 (signal transducers and activators of transcription 1) is a member of the STAT family of transcription factors. STAT1 can be activated by interferon-alpha, interferon-gamma, EGF, PDGF and IL6. STAT1 is known to regulate several genes which are involved in cell growth, apoptosis, immune responses, and lipid metabolism. Further, STAT1 plays an important role in mediating cell viability in response to different cell stimuli and pathogen exposure. The STAT1 gene is located on chromosome 2. STAT1 is activated to regulate gene expression in response to extracellular signaling polypeptides including cytokines, interferons, and growth factors. After phosphorylation by JAK tyrosine kinases, STAT1 enters the nucleus to regulate transcription of many different genes. Among the seven STATs types, STAT1, STAT3, STAT5a, and STAT5b have a wide activation profile. STAT1 is activated by many different ligands including IFN family (IFN-Alpha, IFN-Beta, IFN-gamma and IL-10), gp130 family (IL-6, IL-11, LIF, CNTF, and G-CSF), and receptor tyrosine kinases (EGF, PDGF, and CSF-1). Two alternatively spliced transcript variants encoding distinct isoforms of STAT1 have been described.

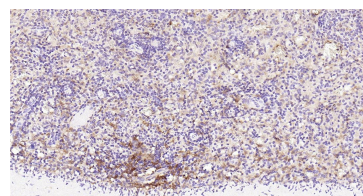
Validation Data



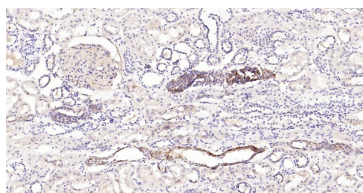
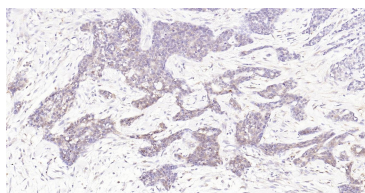
Immunohistochemical analysis of paraffin embedded human tonsil tissue slide using IHC0222H (Human STAT1 IHC Kit).



Immunohistochemical analysis of paraffin embedded human colon cancer tissue slide using IHC0222H (Human STAT1 IHC Kit).



Immunohistochemical analysis of paraffin embedded human spleen tissue slide using IHC0222H (Human STAT1 IHC Kit).



Immunohistochemical analysis of paraffin
embedded human breast cancer tissue slide
using IHC0222H (Human STAT1 IHC Kit).

Immunohistochemical analysis of paraffin
embedded human kidney tissue slide using
IHC0222H (Human STAT1 IHC Kit).