Technical Data Sheet

# Purified Mouse Anti-Itch

## Product Information

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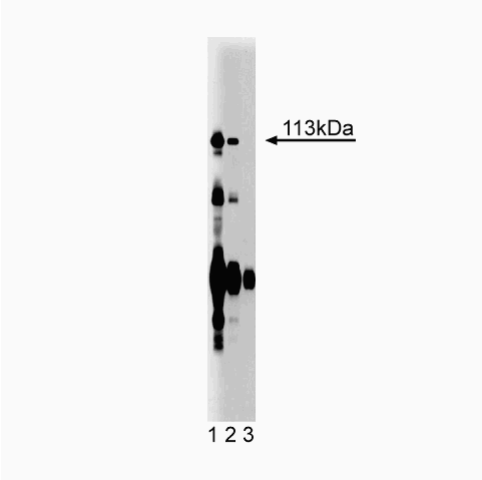
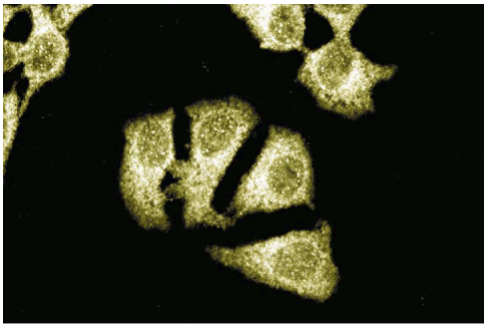
|---|---|
| **Material Number:** | **611198** |
| **Size:** | 50 µg |
| **Concentration:** | 250 µg/ml |
| **Clone:** | 32/Itch |
| **Immunogen:** | Mouse Itch aa. 114-220 |
| **Isotype:** | Mouse IgG1 |
| **Reactivity:** | QC Testing: Rat<br>Tested in Development: Human, Mouse, Rabbit |
| **Target MW:** | 113 kDa |
| **Storage Buffer:** | Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide. |

## Description

Maintenance of cellular function requires timely and selective degradation of key regulatory proteins. For example, progression of the mammalian cell cycle is regulated by phosphorylation/dephosphorylation and synthesis/degradation of many key proteins via the ubiquitin pathway. Ubiquitin, a soluble protein of 76 amino acids, is enzymatically attached to an ε-NH2-Lys in a target protein. Ubiquitin-conjugated proteins are recognized and degraded by the 26S proteasome. Ubiquitination requires ubiquitin-activating enzyme E1, ubiquitin-conjugating enzymes E2, and ubiquitin ligases E3. The direction of ubiquitin transfer is from E1 to E2 and from E2 to E3. Itch, a novel E3 ubiquitin ligase, is absent in the Non-agouti-lethal 18H mice. These mice develop immunological, inflammatory, epithelial, and hematopoietic diseases. Itch contains four WW protein interaction domains, which bind to proline-rich sequences in a fashion similar to SH3 domains. In addition, Itch contains a C-terminal Hect domain, which is conserved in the E3 family of ubiquitin ligases. Thus, Itch is important in the ubiquitin-dependent protein degradation occurring in normal hematopoiesis and inflammation.




***Western blot analysis of Itch on rat liver lysate.*** *Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of anti-Itch antibody.*



***Immunofluorescent staining of HeLa cells with anti-Itch antibody.***

## Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

**BD Biosciences**

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## Application Notes

**Application**

| | |
|---|---|
| Western blot | Routinely Tested |
| Immunofluorescence | Tested During Development |

**Recommended Assay Procedure:**

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml .

## Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|---|---|---|---|
| 611467 | Rat Liver Lysate | 500 µg | (none) |
| 554002 | HRP Goat Anti-Mouse Ig | 1.0 ml | (none) |
| 554001 | FITC Goat Anti-Mouse Ig | 0.5 mg | Polyclonal |

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

## References

Perry WL, Hustad CM, Swing DA, O'Sullivan TN, Jenkins NA, Copeland NG. The itchy locus encodes a novel ubiquitin protein ligase that is disrupted in a18H mice. *Nat Genet.* 1998; 18(2):143-146.(Biology)