

**Phosphotyrosine Antibody**  
**Phosphotyrosine Antibody, Clone G104**  
**Catalog # ASM10110**

**Specification**

**Phosphotyrosine Antibody - Product Information**

Application **IHC, WB**  
Host **Mouse**  
Isotype **IgG1**  
Clonality **Monoclonal**

**Description**

Mouse Anti- Phosphotyrosine Monoclonal IgG1

**Target/Specificity**

Reacts with phosphotyrosine, and detects the presence of phosphotyrosine in both un-stimulated and stimulated cell lysates. Does not cross-react with phosphoserine or phosphothreonine.

**Other Names**

PhosphoTyrosine (pY) Antibody,  
PhosphoTyrosine (pY) Antibody

**Immunogen**

Phosphotyrosine, alanine and glycine in a 1:1:1 ratio polymerized in the presence of keyhole limpet hemocyanin with 1-ethyl-3-(3'-dimethylaminopropyl) carbodiimide

**Purification**

Protein G Purified

Storage **-20°C**

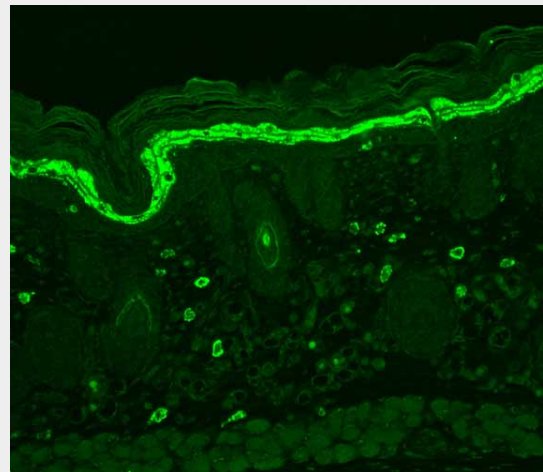
**Storage Buffer**

PBS pH7.4, 50% glycerol, 0.09% sodium azide

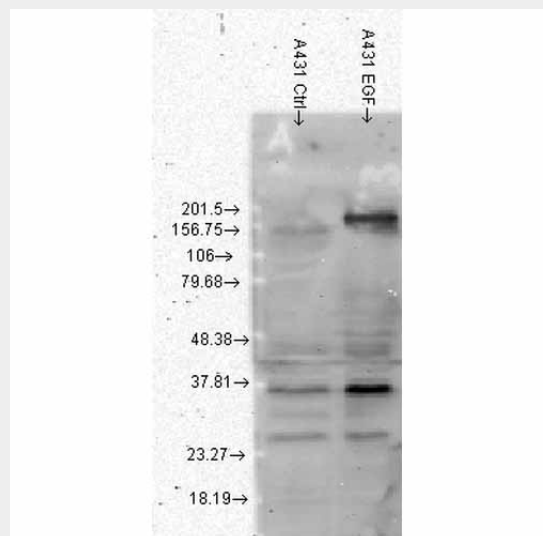
Shipping **Blue Ice or 4°C**  
Temperature

**Certificate of Analysis**

1 µg/ml of SMC-174 was sufficient for detection of phosphorylated tyrosine residues in 10 µg of rat tissue lysate by colorimetric immunoblot analysis using Goat anti-rat IgG:HRP as the secondary antibody.



Immunohistochemistry analysis using Mouse Anti-Phosphotyrosine Monoclonal Antibody, Clone G104 (ASM10110). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-Phosphotyrosine Monoclonal Antibody (ASM10110) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Stratum granulosum staining in the epidermis. Some dermal staining.



Western Blot analysis of Human A431 cell lysates showing detection of Phosphotyrosine

## Phosphotyrosine Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

protein using Mouse Anti-Phosphotyrosine Monoclonal Antibody, Clone G104 (ASM10110). Load: 15 µg. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Phosphotyrosine Monoclonal Antibody (ASM10110) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT. Left: normal, right: EGF treated.

## Phosphotyrosine Antibody - Background

Protein phosphorylation is an important posttranslational modification that serves many key functions to regulate a protein's activity, localization, and protein-protein interactions. Phosphorylation is catalyzed by various specific protein kinases, which involves removing a phosphate group from ATP and covalently attaching it to a recipient protein that acts as a substrate. Most kinases act on both serine and threonine; others act on tyrosine, and a number (dual specificity kinases) act on all three. Because phosphorylation can occur at multiple sites on any given protein, it can therefore change the function or localization of that protein at any time (3). Changing the function of these proteins has been linked to a number of diseases, including cancer, diabetes, heart disease, inflammation and neurological disorders (4-6).

In particular, the phosphorylation of tyrosine is considered one of the key steps in signal transduction and regulation of enzymatic activity (7). Phosphotyrosine can be detected through specific antibodies, and are helpful in facilitating the identification of tyrosine kinase substrates (8).

## Phosphotyrosine Antibody - References

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2. Garton A.J., and Tonks N.K. (1999) J Bio Chem. 274(6): 3811-3818.
3. Goto H. et al. (2005) Nature Cell Biology 8: 180-187.
4. Blume-Jensen P. and Hunter T. (2001) Nature 411: 355-365.
5. Downward J. (2001) Nature 411: 759-762.
6. Pawson T. and Saxton T.M. (1999) Cell 97: 675-678.
7. Frackelton A.R. Jr., Ross A.H., and Eisen H.N.

- (1983) Mol Cell Biol. 3: 1343-1352.  
8. Ross A.H., Baltimore D., and Eisen H.N.  
(1981) Nature 294: 654-656.  
9. Tiganis T., Kemp B.E., and Tonks N.K. (1999)  
J. Bio Chem. 274(39): 27768-27775.