Anti-Phosphotyrosine
Catalog# SPC-161F
Size: 400µl

PO Box 55036, Cadboro Bay
3825 Cadboro Bay Road,
Victoria, BC, V8N 4G0, Canada

StressMarq
Biosciences Inc.
Orders • sales@stressmarq.com
Tel: • +1 250 294 9065
Fax: • +1 250 294 9025
Email • info@stressmarq.com
Web • www.stressmarq.com

Product	**Rabbit, phosphotyrosine, polyclonal**
Clone	**N/A**
Immunogen	**Phosphotyrosine conjugated to KLH**
Host and Subclass	**Rabbit polyclonal**
Cited Applications	**WB (7), ELISA (7), IP, IHC**
Specificity	**Recognizes proteins phosphorylated on tyrosine residues. Does not cross-react with phosphoserine or threonine.**
Species cross-reactivity	**Multi-species.**
Format	**In PBS pH7, in 0.01%NaN_3 Affinity Purified.**
Concentration and working dilution	**250µg/ml; WB 2 µg/mL, ELISA 0.5 µg/ml, IP 10 µg/mg sample**
Storage and stability	**-20˚C; 1 year+; shipped on cold packs or ambient**

Scientific 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 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 (1). Changing the function of these proteins has been linked to a number of diseases, including cancer, diabetes, heart disease, inflammation and neurological disorders (2-4).

In particular, the phosphorylation of tyrosine is considered one of the key steps in signal transduction and regulation of enzymatic activity (5). Phosphotyrosine can be detected through specific antibodies, and are helpful in facilitating the identification of tyrosine kinase substrates (6).

Selected References

1. Goto, H. *et al*. (2005). *Nature Cell Biology* 8: 180-187.
2. Blume-Jensen, P. and Hunter, T. (2001). *Nature* 411: 355-365.
3. Downward, J. (2001). *Nature* 411: 759-762.
4. Pawson, T. and Saxton, T.M. (1999). *Cell* 97: 675-678.
5. Frackelton, A.R. Jr., Ross, A.H., and Eisen, H.N. (1983). *Mol Cell Biol*. 3: 1343-1352.
6. Ross, A.H., Baltimore, D., and Eisen, H.N. (1981). *Nature* 294: 654-656.
7. Ostrovsky, PC. (1995). Genes Dev. 9(16): 2034-2041.

Material Safety Data Sheet

Anti-Phosphotyrosine (Polyclonal Antibody) SPC-161

This product is for *in vitro* research use only and is not intended for use in humans or animals

The below information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. StressMarq shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalogue for additional terms and conditions of sale.

Hazardous Ingredients

The physical, chemical and toxicological properties of these components have not been fully investigated. It is recommended that all laboratory personnel follow standard laboratory safety procedures when handling this product. Safety procedures should include wearing OSHA approved safety glasses, gloves and protective clothing. Direct physical contact with this product should be avoided.

Known Hazardous Components	CAS Number	Percent
Sodium Azide	26628-22-8	0.01

Physical Data

This product consists of rabbit immunoglobulin in PBS containing 0.1% azide shipped on gel packs. The physical properties of this product have not been investigated thoroughly.

Fire and Explosion Hazard and Reactivity Data

NOT APPLICABLE

Toxicological Properties

May be harmful by inhalation, ingestion, or skin absorption. The toxicological properties of this product have not been investigated thoroughly. Exercise due caution.

Preventative Measures

Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.

Spill and Leak Procedures

Observe all federal, state and local environmental regulations.

- Wear protective equipment.
- Absorb on sand or vermiculite and place in closed containers for disposal.
- Dispose or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

First Aid Measures

- If swallowed, wash out mouth with water, provided person is conscious. Call a physician.
- In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If a rash or other irritation develops, call a physician.
- If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
- In case of eye contact, flush with copious amounts of water for at least 15 minutes while separating the eyelids with fingers. Call a physician.

Authorized: StressMarq Biosciences
Creation Date: 07/07/2007