AP08683PU-N

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Polyclonal Antibody to IFNAR1 pSer535/539 - Aff - Purified

Alternate names: CRF2-1, Cytokine receptor class-II member 1, Cytokine receptor family 2 member 1, IFN-R-1, IFN-alpha Receptor alpha, IFN-alpha/beta receptor 1, Interferon-alpha/beta receptor alpha chain, Type I interferon receptor 1

Catalog No.: AP08683PU-N

Quantity: 0.1 ml

Background: Interferons are widely used therapeutic agents because of their anti tumor and antiviral effects and because of their modulatory effects on the immune system (Biron, 2001; Kirkwood, 2002). These cytokines produce their effects by binding to the Type 1 Interferon-α Receptor (IFNAR1). Down regulation of this receptor plays a key role in determining the magnitude and duration of cytokine signaling. This down regulation is thought to be influenced by phosphorylation of Serine 535 and 539 in the IFNAR1 (Kumar et al., 2003).

Uniprot ID: P17181

NCBI: NP_000620.2

GeneID: 3454

Host / Isotype: Rabbit / IgG

Immunogen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser535,539 of Human IFNAR1.

Format:
State: Liquid purified Ig fraction.
Purification: Sequential Chromatography on phospho- and dephosphopeptide affinity columns.
Buffer System: 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% Glycerol.

Applications:
Western blot: 1/1000.
Immunohistochemistry: 1/1000.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody is specific for the IFNAR1 protein phosphorylated at Ser535,539.
Note: The Molecular Weight of the IFNAR1 varies with cell line (different levels of glycosylation) in 293 and HeLa Cells; the mature form is ~110-130k.

Species Reactivity:
Tested: Rat.
Expected from sequence similarity: Bovine, Canine, Human, Mouse, Sheep and non-Human Primates.

Storage: Store the antibody undiluted (in aliquots) at -20°C.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

Product Citations:

Originator or purchased from resellers:

1. Kumar KG, Krolewski JJ, Fuchs SY. Phosphorylation and specific ubiquitin acceptor sites are required for ubiquitination and degradation of the IFNAR1 subunit of type I interferon receptor. J Biol Chem. 2004 Nov 5;279(45):46614-20. Epub 2004 Aug 26. PubMed PMID: 15337770.
2. Bhattacharya S, HuangFu WC, Liu J, Veeranki S, Baker DP, Koumenis C, et al. Inducible priming phosphorylation promotes ligand-independent degradation of the IFNAR1 chain of type I interferon receptor. J Biol Chem. 2010 Jan 22;285(4):2318-25. doi: 10.1074/jbc.M109.071498. Epub 2009 Nov 30. PubMed PMID: 19948722.

General Readings:

1. Biron CA. Interferons alpha and beta as immune regulators--a new look. Immunity. 2001 Jun;14(6):661-4. PubMed PMID: 11420036.
2. Kirkwood J. Cancer immunotherapy: the interferon-alpha experience. Semin Oncol. 2002 Jun;29(3 Suppl 7):18-26. PubMed PMID: 12068384.
3. Kumar KG, Tang W, Ravindranath AK, Clark WA, Croze E, Fuchs SY. SCF(HOS) ubiquitin ligase mediates the ligand-induced down-regulation of the interferon-alpha receptor. EMBO J. 2003 Oct 15;22(20):5480-90. PubMed PMID: 14532120.

Pictures:

Figure 1. Western blot of immunoprecipitates from HEK 293 cells transfected with: 1. Mock, 2. IFNAR1 WT, and 3. IFNAR1 S535A and S539A mutants showing specific immunolabeling of the ~110k to ~130k IFNAR1 WT. The immunolabeling is absent in IFNAR1 Ser535 and Ser539 mutants (Control). The immunolabeling is blocked by the phosphopeptide (Phos) used as the antigen but not by the corresponding dephosphopeptide (Dephos).