PRODUCT INFORMATION

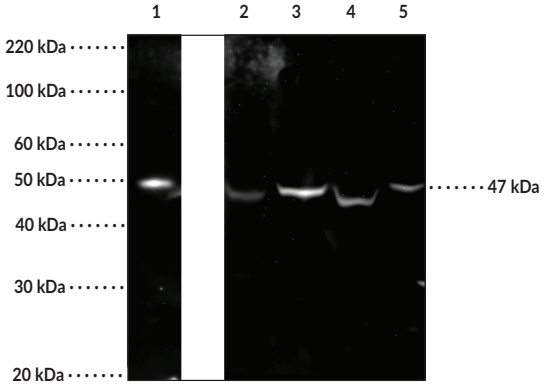
IRF3 Polyclonal Antibody

Item No. 24937

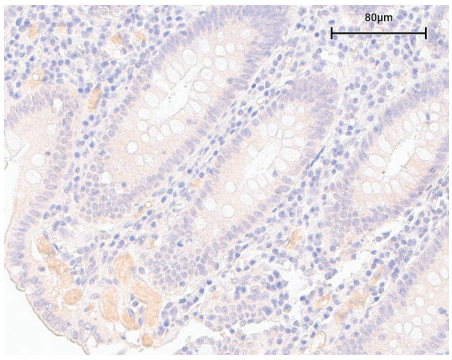
Overview and Properties

Contents: This vial contains 100 µg of protein A-purified IgG.
Synonym: Interferon Regulatory Factor 3
Immunogen: Human recombinant IRF3
Species Reactivity: (+) Human, green monkey; other species not tested
Uniprot No.: Q14653
Form: Liquid
Storage: -20°C (as supplied)
Stability: ≥1 year
Storage Buffer: PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host: Rabbit
Isotype: IgG
Applications: ELISA, Immunohistochemistry (IHC), and Western blot (WB); the recommended starting dilution is 1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: IRF3 (human recombinant) (1 ng)
Lane 2: Jurkat Cell Lysate (50 µg)
Lane 3: MCF-7 Cell Lysate (50 µg)
Lane 4: COS-1 Cell Lysate (50 µg)
Lane 5: A549 Cell Lysate (50 µg)



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human colon tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with IRF3 polyclonal antibody, (Item No. 24937), at a 1:200 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Interferon regulatory factor 3 (IRF3) is a member of the IRF family that plays a crucial role in activation of innate immunity and inflammation in response to viral infection, functioning as a molecular switch for antiviral activity.[1-5] Double-stranded RNA generated during a viral infection leads to IRF3 activation through serine/threonine phosphorylation by TBK1 (Item No. 22817) or IKKε (IKBKE) kinases, which induces a conformational change leading to its dimerization, nuclear localization, and association with CREB binding protein (CREBBP)/p300.[1-3,6] The complex formed by this association, known as DRAF1, activates transcription of interferon α (IFN-α) and IFN-β as well as other IFN-induced genes, which play a critical role in the type 1 IFN-dependent immune response.[1,5,6] Cayman's IRF3 Polyclonal Antibody can be used for ELISA, Immunohistochemistry, and Western Blot applications. The antibody recognizes IRF3 at ~47 kDa from human samples.

References

1. Shu, C., Sankaran, B., Chaton, C.T., *et al.* Structural insights into the functions of TBK1 in innate antimicrobial immunity. *Structure* **21(7)**, 1137-1148 (2013).
2. Huang, J., Liu, T., Xu, L.G., *et al.* SIKE is an IKKε/TBK1-associated suppressor of TLR3- and virus-triggered IRF-3 activation pathways. *EMBO J.* **24(23)**, 4018-4028 (2005).
3. tenOever, B.R., Servant, M.J., Grandvaux, N., *et al.* Recognition of the measles virus nucleocapsid as a mechanism of IRF-3 activation. *J. Virol.* **76(8)**, 3659-3669 (2002).
4. Xu, L.G., Wang, Y.Y., Han, K.J., *et al.* VISA is an adapter protein required for virus-triggered IFN-β signaling. *Mol. Cell.* **19(6)**, 727-740 (2005).
5. Peteranderl, C. and Herold, S. The impact of the interferon/TNF-related apoptosis-inducing ligand signaling axis on disease progression in respiratory viral infection and beyond. *Front. Immunol.* **8:313**, (2017).
6. Gu, L., Fullam, A., Brennan, R., *et al.* Human DEAD box helicase 3 couples IκB kinase ε to interferon regulatory factor 3 activation. *Mol. Cell. Biol.* **33(10)**, 2004-2015 (2013).

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