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KSHV ORF45 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1016a

Specification

KSHV ORF45 Antibody - Product Information

Application	**WB, IHC, E**
Primary Accession	F5HDE4
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**

Description
Kaposi's sarcoma-associated herpesvirus (KSHV) belongs to the gamma-(2)-herpesvirus subfamily and has been closely linked to the Kaposi’s sarcoma, primary effusion lymphoma (PEL) and multicentric Castleman’s disease. The genome of KSHV is 165-170 kb and contains at least 88 open reading frames. ORF45 protein encoded by an immediate-early gene in the KSHV genome is characterized as a phosphorylated protein, and it is localized in the cytoplasm of infected cells. Studies have shown that ORF45 Protein interacted with cellular IRF-7 and blocked virus-mediated phosphorylation and nuclear translocation of IRF-7. In consequence, ORF45 efficiently inhibited virus-induced production of type I IFN. Zhu et al (2003) reported that the ORF45 Protein was associated with purified virions

Immunogen
Purified recombinant fragment of KSHV ORF45 expressed in E. Coli.

Formulation
Ascitic fluid containing 0.03% sodium azide.

KSHV ORF45 Antibody - Additional Information

Gene ID 4961474

Other Names
Protein ORF45, ORF45

Dilution
WB~~1/500 - 1/2000
IHC~~1/200 - 1/1000
E~~N/A

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
KSHV ORF45 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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KSHV ORF45 Antibody - Protein Information

Name ORF45

Function
Prevents the establishment of cellular antiviral state by blocking virus-induced phosphorylation and activation of host interferon regulatory factor 7/IRF7, a transcription factor critical for the induction of interferons alpha and beta (PubMed:11943871, PubMed:20485504, PubMed:22787218). Mechanistically, ORF45 competes with the associated IRF7 and inhibits its phosphorylation by IKBKE or TBK1 by acting as an alternative substrate (PubMed:11943871, PubMed:22787218). Acts as an activator of the NLRP1 inflammasome via interaction with the N-terminal part of host NLRP1: interaction promotes translocation of the N-terminal part of NLRP1 into the nucleus, relieving autoinhibition of the NLRP1 inflammasome and leading to its activation (PubMed:35618833). Also plays a role in promoting the late transcription and translation of viral lytic genes by constitutively activating host extracellular signal-regulated kinase (ERK)-p90 ribosomal S6 kinase/RPS6KA1 (PubMed:30842327). In addition, supports the viral replication cycle by modulating host p53/TP53 signaling pathway (PubMed:34523970). Interacts with host p53/TP53 and prevents its interaction with the deubiquitinase USP7, leading to sequestration of P53/TP53 in the host cytoplasm thereby diminishing its transcriptional activity (PubMed:34523970).

Cellular Location
Virion tegument. Host cytoplasm. Host nucleus. Host Golgi apparatus

KSHV ORF45 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 Cytomety
- Cell Culture

KSHV ORF45 Antibody - Images

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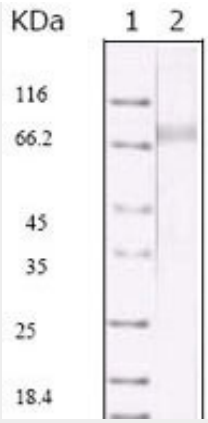

Figure 1: Western blot analysis using KSHV ORF45 mouse mAb against KSHV ORF45 recombinant protein.

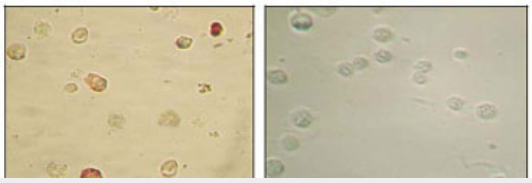

Figure 2: Immunocytochemistry analysis of TPA induced BCBL-1 cells (A) and uninduced BCBL-1 cells (B) using KSHV ORF45 mouse mAb with AEC staining.

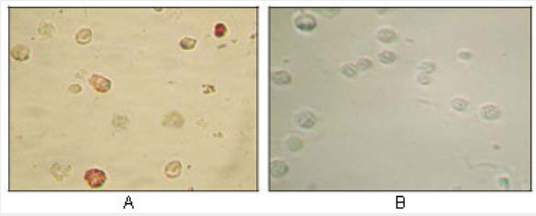

Figure 2: Immunocytochemistry analysis of TPA induced BCBL-1 cells(A) and uninduced BCBL-1 cells(B) using anti-KSHV ORF45 monoclonal antibody with AEC staining.

KSHV ORF45 Antibody - References

1. Chang Y. et al. 1994. Science. 266:1865-1869. 2. Zhu FX. et al. 2002. PNAS. 99: 5573-5578. 3. Zhu FX. et al. J Virol. 2003. April (77): 4221-4230.