

ULBP3 (D-1): sc-390844

BACKGROUND

The immune system contains genetically encoded subsystems, which monitor the extracellular environment in order to eliminate pathogens and resolve abnormal or transformed tissues. Cytomegalovirus UL16 binding proteins, known as ULBPs, are GPI-linked glycoproteins that belong to the extended MHC class I family and are distantly related to MHC class I polypeptide-related sequence B, known as MICB. ULBP and MICB proteins are ligands for the activating receptor NKG2D/DAP10, which causes lymphocyte activation resulting in the secretion of cytokines, such as interferon- γ , and tumor cell lysis. The interaction of ULBP or MICB with NKG2D/DAP10 can be blocked by the soluble form of UL16. ULBPs stimulate cytokine and chemokine production from NK cells, CD8 α/β T cells, and γ/δ T cells. Soluble forms of ULBPs induce protein tyrosine phosphorylation and activation of the Janus kinase 2, STAT5, extracellular signal-regulated kinase, mitogen-activated protein kinase and phosphatidylinositol 3-kinase (PI 3-kinase)/Akt signal transduction pathways.

CHROMOSOMAL LOCATION

Genetic locus: ULBP3 (human) mapping to 6q25.1.

SOURCE

ULBP3 (D-1) is a mouse monoclonal antibody raised against amino acids 173-217 mapping near the C-terminus of ULBP3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ULBP3 (D-1) is available conjugated to agarose (sc-390844 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390844 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390844 PE), fluorescein (sc-390844 FITC), Alexa Fluor[®] 488 (sc-390844 AF488), Alexa Fluor[®] 546 (sc-390844 AF546), Alexa Fluor[®] 594 (sc-390844 AF594) or Alexa Fluor[®] 647 (sc-390844 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390844 AF680) or Alexa Fluor[®] 790 (sc-390844 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ULBP3 (D-1) is recommended for detection of ULBP3 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ULBP3 siRNA (h): sc-43006, ULBP3 shRNA Plasmid (h): sc-43006-SH and ULBP3 shRNA (h) Lentiviral Particles: sc-43006-V.

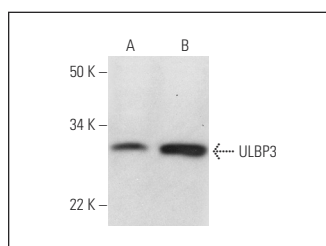
Molecular Weight of ULBP3: 28 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

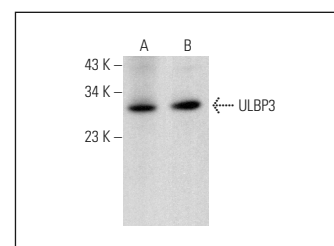
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



ULBP3 (D-1): sc-390844. Western blot analysis of ULBP3 expression in HeLa (A) and Hep G2 (B) whole cell lysates.



ULBP3 (D-1): sc-390844. Western blot analysis of ULBP3 expression in mouse liver (A) and mouse testis (B) tissue extracts.

SELECT PRODUCT CITATIONS

- Oh, S.J., et al. 2017. Human U87 glioblastoma cells with stemness features display enhanced sensitivity to natural killer cell cytotoxicity through altered expression of NKG2D ligand. *Cancer Cell Int.* 17: 22.
- Okita, R., et al. 2019. Clinicopathological relevance of tumor expression of NK group 2 member D ligands in resected non-small cell lung cancer. *Oncotarget* 10: 6805-6815.
- Guo, L., et al. 2020. Down-regulation of UL16-binding protein 3 mediated by interferon- γ impairs immune killing in nasopharyngeal carcinoma. *Am. J. Transl. Res.* 12: 6509-6523.

STORAGE

Store at 4[°] C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.