Shigatoxin (STX-1): sc-69865

**BACKGROUND**

Hemolytic uremic syndrome (HUS) is the number one cause of acute renal failure in children worldwide. HUS is characterized by microangiopathic hemolytic anemia, a low platelet count and diarrhea. Shigatoxins (Stxs) produced by *Shigella dysenteriae* type 1 and enterohemorrhagic *Escherichia coli* are the most common cause of HUS. Shigatoxin 1 (Stx1) is an *Escherichia coli* protein that increases arachidonate release and eicosanoid production in glomerular epithelial cells, thereby inhibiting protein synthesis. It also increases cytokine release by renal epithelial cells. Proximal tubule inflammatory cytokine production is stimulated by Stx1, which also stimulates IL-6 mRNA accumulation when it is overexpressed. Brain injury in HUS is related to Stx1 binding to globotriaosylceramide. Inhibition of p38 MAPK significantly reduces the inflammatory cytokine upregulation of Stx-receptor synthesis and cell surface expression, thereby decreasing Stx cytotoxicity.

**REFERENCES**


**SOURCE**

Shigatoxin (STX-1) is a mouse monoclonal antibody raised against Shigatoxin of *E. coli* origin.

**PRODUCT**

Each vial contains 200 µg IgG, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Shigatoxin (STX-1) is available conjugated to agarose (sc-69865 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-69865 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-69865 PE), fluorescein (sc-69865 FITC), Alexa Fluor® 488 (sc-69865 AF488), Alexa Fluor® 546 (sc-69865 AF546), Alexa Fluor® 594 (sc-69865 AF594) or Alexa Fluor® 647 (sc-69865 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-69865 AF680) or Alexa Fluor® 790 (sc-69865 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

Shigatoxin (STX-1) is recommended for detection of Shigatoxin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker® Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-61214 and Western Blotting Luminol Reagent: sc-2048.

**STORAGE**

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

**PROTOCOLS**

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

**RESEARCH USE**

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