

DSS Blocker Diluent

Catalogue No.: E145

Size: 100mL

Storage:

The kit should be stored at 2-8°C for 12 months.

Background:

Dextran sulfates (DSS) are anionic polymers produced by the reaction of dextran with chlorosulfuric acid, with a sulfur content of approximately 17% (equivalent to an average of 1.9 sulfate groups per glucose residue). In studies on inflammatory bowel disease (IBD) and colorectal cancer, DSS with molecular weights of 36,000–50,000 Da induces colitis in mice and rats by binding to chain fatty acids in the colon and triggering inflammation. DSS is a water-soluble polyanionic complex that forms a clear, colorless solution. It is commonly administered at 2%–5% directly in the drinking water of animals to establish disease models, or used at 3% in serum-free culture medium to stimulate cells to secrete inflammatory cytokines such as IL-6 and IL-10. However, when samples containing more than 0.3% DSS are used in ELISA assays, significant high background signals may occur, affecting data analysis. FineTest has developed a specialized blocking sample diluent (DSS Blocker Diluent) for high-concentration DSS samples, which effectively reduces background and restores assay accuracy.

Instructions for Use: For 3% DSS in culture medium.:

1. Use when, in ELISA assays, the DSS sample blank control shows high background with OD450 > 0.3.
2. Refer to the blocking volume reference table (for other concentrations of DSS, calculate the blocker volume proportionally based on the DSS content). Do not use volumes below or above the recommended blocker volumes indicated in the table.

	3% DSS sample	DSS Blocker Diluent	OD450
1	80ul	20ul	0.1681
2	60ul	40ul	0.1581
3	50ul	50ul	0.1162

3. Add the sample to an EP tube, then add the corresponding volume of DSS Blocker Diluent. The sample will immediately turn white and turbid—this is normal. Do not vortex mix or pipette up and down repeatedly. Let stand at room temperature for 10 minutes, then centrifuge and collect the supernatant for detection. The supernatant can be further diluted with the kit's sample diluent or PBS before testing.



Test Data:

Group	OD450 (50ul sample+50ul PBS)	OD450 (50ul sample+50ul DSSBlockerDiluent)
1640/DSS+	0.7251	0.1279
1640/DSS+/rh.IL-6	0.9443	0.6165
1640/DSS+/rm.IL-6	1.1356	0.8541
DMEM/DSS+	0.8106	0.1203
DMEM/DSS+/rh.IL-6	0.9112	0.6704
DMEM/DSS+/rm.IL-6	1.1374	0.8750
10mMPBS PH7.3	0.076	1.2172

[Note]

DSS from MP (MW:36,000-50,000 Da)

1640/DSS+: Serum-free 1640 medium with 3% DSS

DMEM/DSS+: Serum-free DMEM medium with 3% DSS

1640/DSS+/rh.IL-6: Serum-free 1640 medium with 3% DSS, containing recombinant human IL-6 at 100 pg/mL

1640/DSS+/rm.IL-6: Serum-free 1640 medium with 3% DSS, containing recombinant mouse IL-6 at 100 pg/mL

DMEM/DSS+/rh.IL-6: Serum-free DMEM medium with 3% DSS, containing recombinant human IL-6 at 100 pg/mL

DMEM/DSS+/rm.IL-6: Serum-free DMEM medium with 3% DSS, containing recombinant mouse IL-6 at 100 pg/mL

Notes:

1. This kit is for research use only. If used for clinical diagnosis or any other purposes, our company shall not be liable for any problems arising therefrom, nor assume any legal responsibility.

2. Please read the instructions carefully before the experiment and calibrate all instruments accordingly. Strictly follow the instructions throughout the procedure.
3. During the experiment, please wear laboratory coats and latex gloves to ensure proper protection.
4. The final experimental results are closely related to factors such as the validity of the reagents, the operator's technique, and the experimental environment. Our company is only responsible for the product itself and assumes no responsibility for sample consumption resulting from the use of the product. Please fully consider the potential sample usage and reserve sufficient samples before use.