



Products for Mouse Colitis



Inflammatory bowel disease is a multifactorial disease with unknown etiology and is comprised of two major subtypes: ulcerative colitis (UC) and Crohn's Disease (CD). UC mostly affects the large intestine or colon, while CD may affect any part of the gastrointestinal tract (1). To study UC, dextran sulfate sodium (DSS) is frequently used to induce colitis in experimental animals as acute, chronic, or relapsing colitis can be easily induced by changing the DSS concentration or administration period (2).

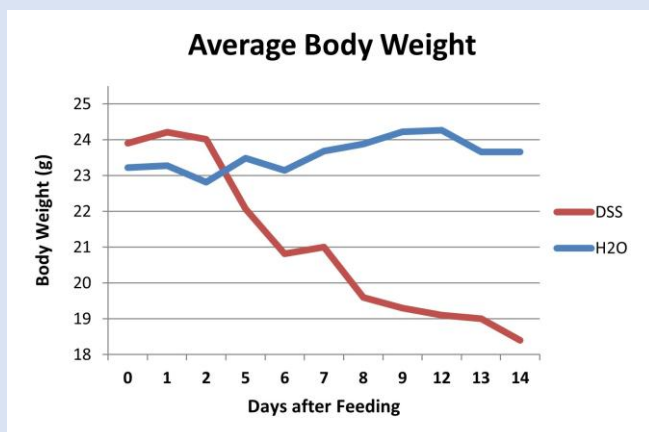
Chondrex, Inc. provides DSS to induce colitis in experimental animals, as well as tools to evaluate features and complications of this disease, which mimics human colitis (3, 4). The following results of a DSS-induced mouse colitis model in C3H mice measured A) body weight, B) hemoglobin (Hb) levels (a marker of anemia) and C) gastrointestinal permeability with FITC-dextran. For more information about these products, please contact Chondrex, Inc. at support@chondrex.com.

Experimental Protocol

C3H Mice (female, 7 - 8 weeks old)

3.5% DSS in water or water only *ad libitum*, Day 1 - Day 5

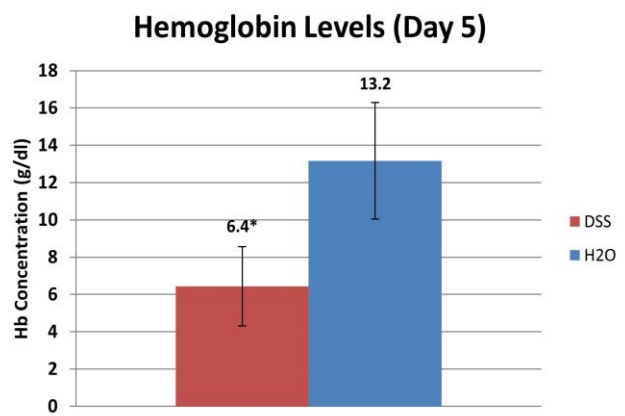
A) Body Weight



Weight Loss in C3H Mice Treated with DSS

Mice were given water (control) or 3.5% DSS *ad libitum* for 5 days. Mice were weighed every weekday until day 14.

B) Hemoglobin



DSS-Induced Colitis Reduces Hb Levels in C3H Mice

Mice were given water (control) or 3.5% DSS *ad libitum* for 5 days. Hb levels were assayed on day 5.

*P<0.005, Student's t-test, indicates that the DSS group is statistically different from the water (control) group.

References

1. R. Boismenu, Y. Chen. Insights from mouse models of colitis. *J Leukoc Biol* **67**, 267-278 (2000).
2. M. Perse, A. Cerar, Dextran sodium sulphate colitis mouse model: traps and tricks. *J Biomed Biotechnol* 718617 (2012).
3. Y. Yan *et al.* Temporal and spatial analysis of clinical and molecular parameters in dextran sodium sulfate induced colitis. *PLoS One* **4**, e6073 (2009).
4. P. R. Carter *et al.* Iron status, anemia, and plasma erythropoietin levels in acute and chronic mouse models of colitis. *Inflamm Bowel Dis* **19**, 1260-1265 (2013).

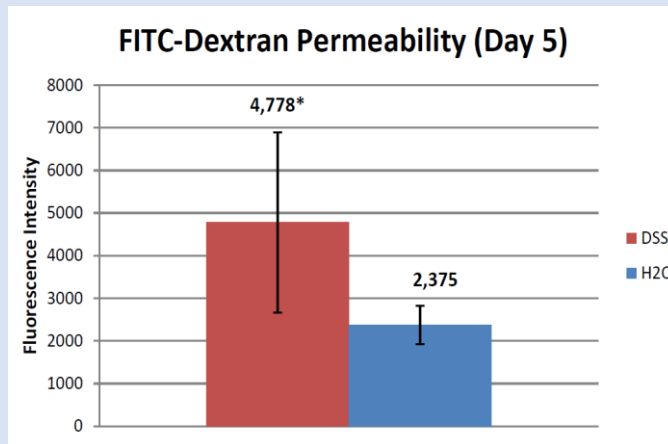


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C) Gastrointestinal Permeability

Procedures	Paracellular Permeability (Dextran)	Transcellular Permeability (D-Xylose)
Fasting	4 hours before administration	4 hours before administration
Dose (Mice)	6.25 mg / 250 µl / 25 g body weight	20 mg / 200 µl / 25 g body weight
Plasma Collection	3 hours after administration	1 hour after administration
Evaluation	FI values: Ex 490 nm/Em 530 nm	Cat # 6601
Note	Permeability: 4 kDa > 40 kDa > 70 kDa	-



DSS-induced colitis increases intestinal permeability in C3H Mice

Mice were given water (control) or 3.5% DSS *ad libitum* for 5 days. The FITC-dextran permeability assay was performed on day 5. *P<0.05, Student's t-test indicates that the DSS group is statistically different from the water (control) group.

Products*	Catalog #
Dextran Sulfate Sodium (DSS) for Colitis, 10 g	CDB001-10g
Dextran Sulfate Sodium (DSS) for Colitis, 20 g	4015
Dextran Sulfate Sodium (DSS) for Colitis, 50 g	CDB001-50g
Dextran Sulfate Sodium (DSS) for Colitis, 100 g	CDB001-100g
Dextran Sulfate Sodium (DSS) for Colitis, 500 g	CDB001-500g
FITC-Labeled Dextran - 4 kDa	4013
FITC-Labeled Dextran - 40 kDa	4009
TRITC-Labeled Dextran - 70 kDa	4014
Hemoglobin Assay Kit	6024
D-Xylose Assay Kit	6601
Mouse S100A8 Detection Kit	6054
Mouse S100A9 Detection Kit	6056

*Chondrex, Inc. provides more sizes of FITC-dextran and other fluorescent probes beyond what is listed here. For more information, please contact support@chondrex.com or visit www.chondrex.com.