

Arthrogen-CIA® Arthritogenic Monoclonal Antibody

Catalog # 53100

For Research Use Only - Not Human or Therapeutic Use

DESCRIPTION:	Mouse monoclonal anti-type II collagen 5-clone antibody cocktail kit with LPS from E. Coli 0111:B4
APPLICATION:	Use for collagen antibody induced arthritis (CAIA) in mice
QUANTITY:	Cocktail: 10 mg/ml x 10 ml LPS: 0.5 mg/ml x 7 ml
FORM:	A cocktail of 5 monoclonal antibodies, clone A2-10 (IgG2a), F10-21 (IgG2a), D8-6 (IgG2a), D1-2G (IgG2b), and D2-112 (IgG2b), recognizing the conserved epitopes on various species of type II collagen. Dissolved in PBS, pH 7.2. Clones A2-10, D1-2G, and D2-112 recognize individual epitopes clustered within the 167 amino acid peptide fragment called LyC1 (124-290) of the CB11 fragment (124-402) of type II collagen. Clones F10-21 and D8-6 recognize epitopes within the 83 amino acid peptide fragment called LyC2 (291-374) of the CB11 fragment of type II collagen.
SOURCE:	Mouse
CROSS-REACTIVITY:	Cross-reacts to most species of type II collagen including mouse, porcine, chick*, bovine, human, rat, monkey, rabbit, equine and dog. *D2-112 does not cross-react with chick type II collagen.
ANIMALS:	7-8 weeks of age or more; high responder mice: DBA/1, Balb/c, B10.RIII, C.B-17, scid/scid, or 129/Sv; low responder mice: C57BL/6 or C57BL/6 background. Sensitivity to CAIA may vary depending on mouse vendor and facility. Specific pathogen free (SPF) housing conditions are strongly recommended over conventional housing conditions, as bacterial contamination may reduce the immune response of the animals resulting in an attenuated arthritis. Therefore, running a pilot study using a small number of animals before conducting a large-scale study is strongly recommended. Please contact customer support for guidance regarding animals and housing conditions.
USAGE:	Administration of the monoclonal antibody cocktail by IV injection (i.e. tail vein) is recommended; however, intraperitoneal (IP) injection may also be used. Moreover, if LPS use is not desired, please note that the severity of arthritis tends to be lower.
PROTOCOLS:	A) Induction of arthritis with a combination of monoclonal antibody cocktail and LPS in CAIA susceptible mice (DBA/1, Balb/c, B10.RIII, C.B-17, scid/scid, or 129/Sv) Day 0: Inject 1.5 mg of 5-clone cocktail by IV or IP injection. Day 3: Inject 25-50 µg of LPS by IP injection. Note: Moderate to severe arthritis will be observed on day 3-4 and peak around day 7-10.

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- B) Induction of arthritis with a combination of monoclonal antibody cocktail and LPS in CAIA low responder mice (C57BL/6 or C57BL/6 background)

Day 0: Inject 5 mg of 5-clone cocktail by IV or IP injection.

Day 3: Inject 25-50 µg of LPS by IP injection.

Note: Moderate to severe arthritis will be observed on day 3-4 and peak around day 7-10. An injection of LPS on day 10-14 can be used to re-stimulate inflammatory arthritis.

- C) Induction of arthritis with the monoclonal antibody cocktail without LPS in DBA/1 and Balb/c mice

Day 0: Inject 6-10 mg of 5-clone cocktail by IV injection.

Note: Arthritis will be observed on day 2-3. This protocol has not been confirmed in other CAIA susceptible mouse strains such as B10.RIII, C.B-17, scid/scid, and 129/Sv mice.

STORAGE TEMPERATURE: -80°C

STABILITY: 2 years

REFERENCES: Terato K. et al. J. Immunol. 148: 2103-2108 (1992)
Terato K. et al. Autoimmunity 22: 137-147 (1995)
Yoshino S. et al. J. Immunol Methods 343: 49-55 (2009)