

BÜHLMANN sCAL[®] turbo

Immunoturbidimetric serum

Calprotectin assay



Fast

Easy

**New
Biomarker
for sJIA**

Serum Calprotectin a biomarker for systemic inflammation*

- Differential diagnosis of sJIA
- Prognosis and monitoring in RA
- Early stratification in sepsis

Fast, easy to use and cost-effective

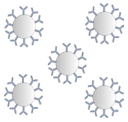
- Works on all clinical chemistry analyzers
- Random access, results in 10 minutes
- Validated and robust pre-analytical process

*For a list of references please contact support@buhlmannlabs.ch

sJIA: systemic juvenile idiopathic arthritis

RA: rheumatoid arthritis

Innovative



- Proven technology: particle turbidimetric immunoassay
- New standardization
- High stability

Fast



- Rapid: 10 min turn-around time
- Flexible, random access use

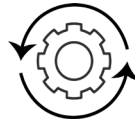
Compliant



- CE certified
- Validated pre-analytical process

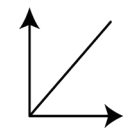
* Can be reached with automated re-run mode

Integrated



- Full automation, high throughput
- Fits into existing equipment

Reliable



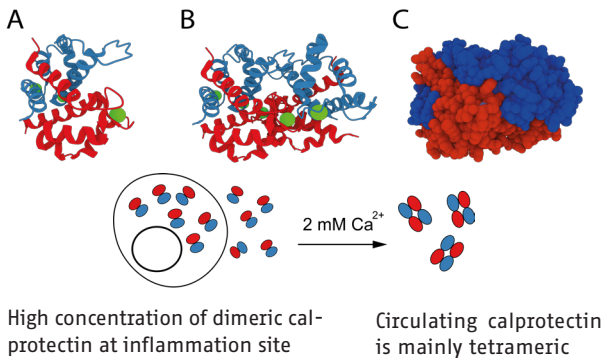
- Large dynamic range 0.30-225* µg/mL
- Full coverage of clinical relevant concentrations
- High precision and reproducibility

Supportive



- Open channel compatibility
- Validated application notes for most clinical chemistry analyzers**

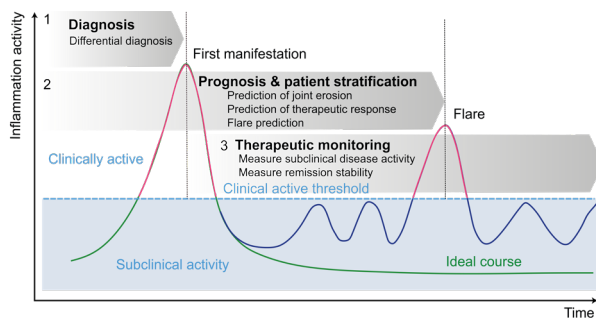
** For a full list of application notes please contact support@buhlmannlabs.ch



Calprotectin is a 24 kDa heterodimer of the proteins S100A8 and S100A9 and plays an important role in inflammation mainly by neutrophil release. Calprotectin is also involved in cellular reorganization and has antimicrobial activity via sequestration of divalent ions. (A) Heterodimer, (B) Heterotetramer, (C) Heterotetramer, molecular surface. Ca^{2+} ions are depicted as green spheres.

Intracellular calprotectin is in its heterodimeric form, but extracellularly calprotectin appears mainly in its heterodimeric, partially inactivated form due to physiological Ca^{2+} concentration. The heterodimeric form binds to the toll like receptor 4 (TLR4) of monocytes and triggers inflammation processes, whereas the heterotetrameric form binds to the CD69 region of monocytes which is reducing inflammatory signaling.

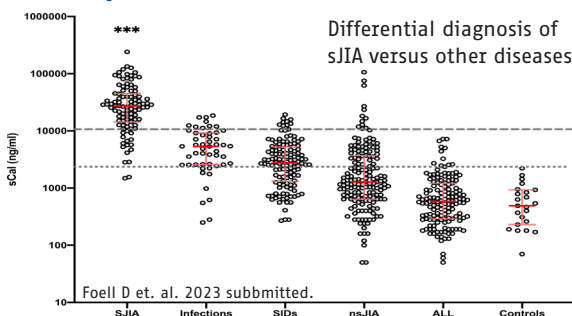
Serum Calprotectin a biomarker for systemic inflammation*



- Serum calprotectin is superior in detecting early inflammation compared to acute phase biomarkers and is strongly correlated to local calprotectin concentration.
- Serum calprotectin levels are significantly higher in individuals suffering from immune-mediated inflammatory diseases (IMIDs) like systemic juvenile idiopathic arthritis (sJIA) and rheumatoid arthritis (RA), but also in individuals with inflammatory disorders such as sepsis.
- Serum calprotectin plays a crucial role in the innate immunresponse. It is independent from the IL-6 recruitment and therefore an ideal marker even for patients under treatment with modern biologics.

*For a list of references please contact support@buhlmannlabs.ch

Serum Calprotectin a biomarker for Immune-mediated Inflammatory diseases



Serum Calprotectin may be used for:

- Prognosis of joint erosion in immune-mediated inflammatory diseases (IMIDs)
- Prediction of therapeutic response
- Flare prediction
- Measurement of subclinical disease activity
- Evaluation of remission stability



BÜHLMANN Laboratories AG
Baselstrasse 55
4124 Schönenbuch
Switzerland

Phone +41 61 487 12 12
Fax orders +41 61 487 12 99
info@buhlmannlabs.ch
www.buhlmannlabs.ch

BÜHLMANN sCAL® turbo Ordering Codes:

Kit	KK-SCAL	REST + CASET + CONSET
Reagent Kit (~100 tests)	B-KSCAL-RSET	R1 24 mL, R2 7.3 mL; Ready to use
Calibrator Kit	B-KSCAL-CASET	6 calibrators, 1 mL each; Ready to use
Control Kit	B-KSCAL-CONSET	Low/high 3 x 1 mL each; Ready to use

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