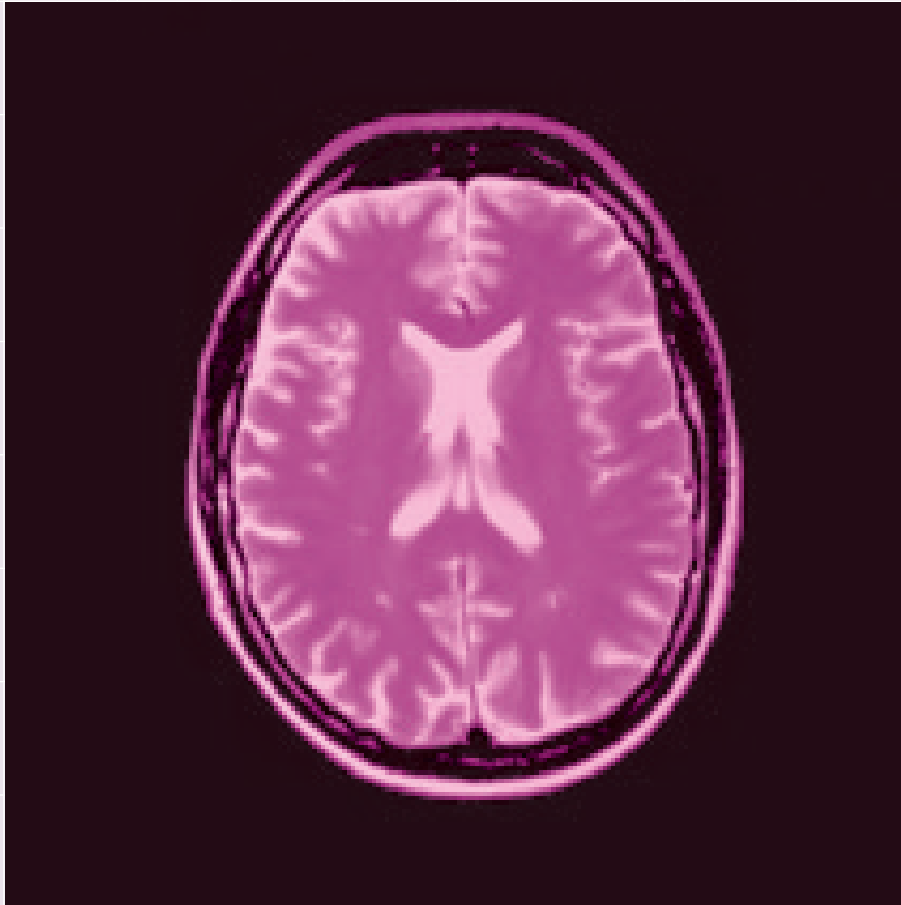


CanAg S100 EIA

CanAg
DIAGNOSTICS



Biochemical marker for brain damage (BMBD)

Serological determination of increased S100 level is a sensitive serological indicator of brain damage after acute brain trauma. It is also clinically proven to be useful for determination and follow up of malignant melanoma.

CanAg S100BB EIA and CanAg S100A1B EIA patent applications has been filed world wide. All antibodies used in CanAg EIA kits are developed at CanAg Diagnostics AB.

Introduction S100

S100 is a 20 kDa protein belonging to the S100/calmodulin/troponin C super family of EF-hand calcium binding proteins. S100 was originally isolated by Moore and co-workers from human brain and was considered as a brain specific protein. Today more than 18 members of the S100 family has been characterised based on structural and functional similarities.

- In brain tissue S100 consists mainly of hetero- and homodimers of (A1) α - and (B) β -subunits. The α - and β -subunits show a high degree of sequence and species homology.
- S100BB dimer (S100 β - β) exists in high concentration in glial cells and Schwann cells, while the S100A1B dimer (S100 α - β) is expressed only in glial cells.
- S100A1A1 (S100 α - α) is present in neurones, but is mainly expressed in extra neural tissues.

CanAg EIA Kit

All antibodies used in CanAg EIA kits are exclusively developed at CanAg Diagnostic AB. MAbs against 5 (4) antigenic determinants in S100B have been established allowing the design of immunoassays against different forms of S100. Research EIA kits for specific determination of S100 isoforms are available:

- S100A1B + S100BB EIA, i.e. "Total" S100 EIA
- S100BB EIA – for clinical research, patent application filed
- S100A1B EIA – for clinical research, patent application filed

Clinical applications for S100

Acute Brain Disease

Serological determination of S100 is a sensitive indicator of brain tissue damage and neurological dysfunction after acute brain trauma. A number of studies have suggested the usefulness of serological S100 determination in the following conditions.

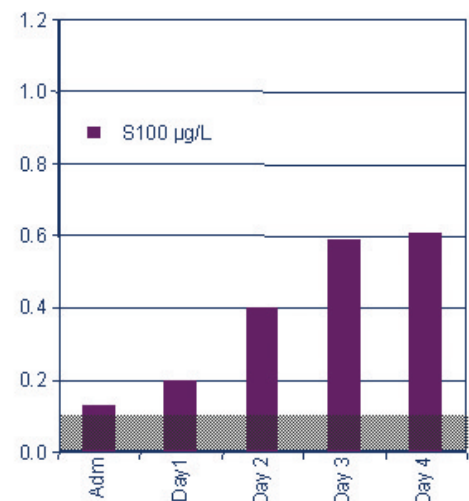
- Neurological complications after ECC; correlation between S100 release in serum and neurological complications
- Major and minor head injury; S100 gives additional clinical information in brain injury owing to trauma and hypoxia compared to CT and MRI
- Stroke; diagnostic aid and early indicator of functional deficit

Malignant Melanoma

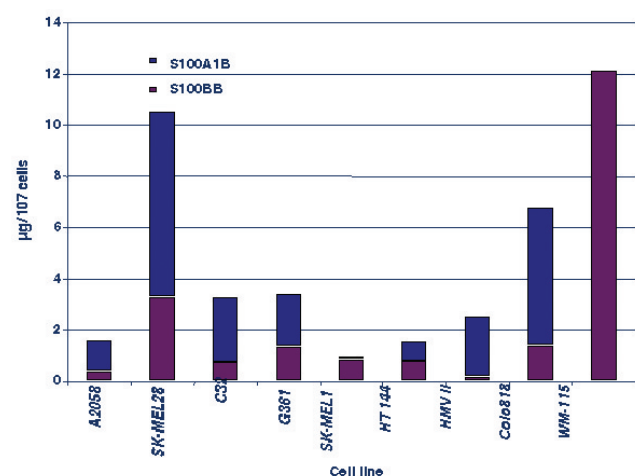
S100 has been shown to be an independent prognostic indicator of poor prognosis in all-clinical stages of malignant melanoma and is useful for follow-up and monitoring of therapy of malignant melanoma.

- Independent prognostic indicator in all stages
- Monitoring of therapy response and disease progression

S100A1B and S100BB in cell lines from patients with malignant melanoma. The proportion of S100A1B and S100BB varied considerably between the different cell lines. Similar variation has been noticed in patient serum samples. The clinical significance is under investigation.



S100 correlated significantly with volume of infarction from the time of admission and related to the short-term outcome of the patients. Source: Herrmann et al. Release of Glial Tissue-Specific Proteins After Acute Stroke, Stroke 2000;31:2670-2677.



Ongoing clinical studies S100

Acute Brain Disease

- Comparison of S100, S100BB and S100A1B during management of patients with stroke.
- Hypoxia: S100A1B and S100BB to determine brain dysfunction/ outcome after cardiac arrest.
- S100 during management of patients with minor head trauma.

Malignant Melanoma

- S100A1B and S100BB during management of patients with malignant melanoma.

References

Acute Brain Disease

Ingebrigtsen et al.: Increased serum concentrations of protein S-100 after minor head injury: a biochemical serum marker with prognostic value? *J Neurol Neurosurg Psych.* 1995;59: 103 - 104.

Jonsson H et al.: S100B as a predictor of size and outcome of stroke after cardiac surgery. *Ann Thorac Surg* 2001 May;71(5):1433-7

Andersson RE et al.: High serum S100B levels for trauma patients without head injuries. *Neurosurgery* 2001 Jun;48(6):1255-8; discussion 1258-60.

Herrmann et al.: Release of Glial Tissue-Specific Proteins After Acute Stroke. *Stroke* 2000;31:2670-2677.

Malignant Melanoma

Hansson L.O. et al.: Prognostic Value of Serum Analyses of S-100 Protein β in Malignant Melanoma. *Anticancer Research* 1997 Jul-Aug;17:3071-3073

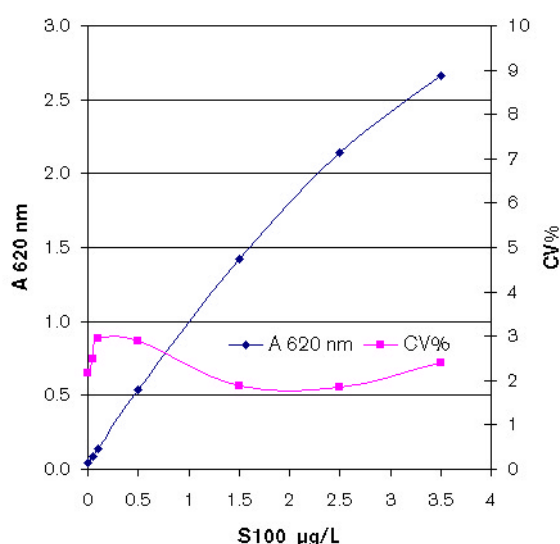
Buer et al.: Elevated serum levels of S100 and survival in metastatic malignant melanoma. *Br J Cancer* 1997;75: 1373-1376

Henze et al.: Serum S-100 – A marker for disease monitoring in metastatic melanoma. *Dermatology*, 1997;194:208-212

Hauschild A. et al.: S-100B-Protein Detection in Serum is a significant Prognostic Factor in Metastatic Melanoma. *Oncology* 1999; 56:338-344.

CanAg S100 EIA, research kit

708-10



ORDERING INFORMATION

Prod. No. 708-10

CanAg S100 EIA, research kit

For 96 determinations

The CanAg S100 EIA is a solid-phase non-competitive assay based on the direct sandwich technique for optimal clinical sensitivity, specificity and non-specific interference for determination of S100, ie S100A1B + S100BB. The assay is based on an antibody specific for S100B as catcher and HRP labelled MAb specific for S100B for detection.

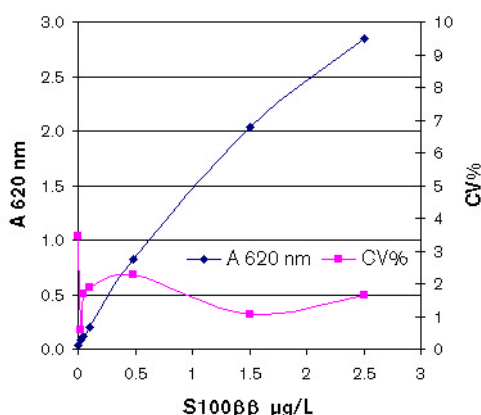
The CanAg S100 EIA is based upon the same high quality standard of MAb from CanAg Diagnostics as all our laboratory test kit products.

SPECIFICATIONS

Results within:	4 hours
Detection limit:	< 0.05 $\mu\text{g/L}$ using 50 μL sample
Sample volume:	50 μL
Hook effect:	620 nm: 150 $\mu\text{g/L}$ 405 nm: 7000 $\mu\text{g/L}$
Stability:	12 months at 4° C
Standard range:	0.050-3.7 $\mu\text{g/L}$
Incubation temp:	20–28° C
Recovery:	97–105%
Detection:	620 nm or 405 nm
Reference value:	< 0.124 $\mu\text{g/L}$

CanAg S100BB EIA, research kit

701-10



A typical standard curve and a precision profile obtained with the CanAg Diagnostics Marker.

ORDERING INFORMATION

Prod. No. 701-10

CanAg S100BB EIA, research kit

For 96 determinations

The CanAg S100BB EIA is a solid-phase non-competitive assay based on the direct sandwich technique for optimal clinical sensitivity, specificity and non-specific interference for determination of the S100BB isoform. The assay is based on an antibody specific for the S100BB dimer as catcher and HRP labelled MAb specific for S100B for detection.

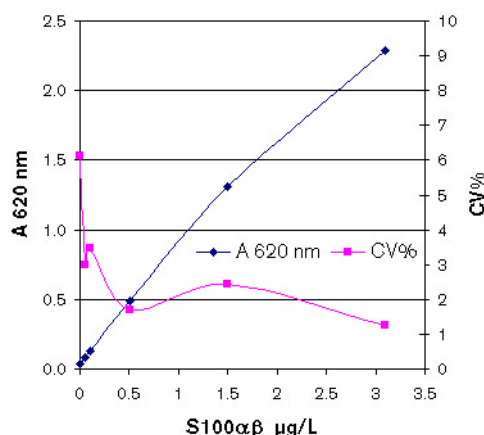
The CanAg S100BB EIA is based upon the same high quality standard of MAb from CanAg Diagnostics as all our laboratory test kit products.

SPECIFICATIONS

Results within:	4 hours
Detection limit:	< 0.02 μg/L using 50 μL sample
Sample volume:	50 μL
Hook effect:	620 nm: 100 μg/L 405 nm: 10000 μg/L
Stability:	12 months at 4° C
Standard range:	0.025-2.7 μg/L
Incubation temp:	20–28° C
Recovery:	95–107%
Detection:	620 nm or 405 nm
Reference value:	< 0.017 μg/L

CanAg S100A1B EIA, research kit

706-10



A typical standard curve and a precision profile obtained with the CanAg Diagnostics Marker.

ORDERING INFORMATION

Prod. No. 706-10

CanAg S100BB EIA, research kit

For 96 determinations

The CanAg S100A1B EIA is a solid-phase non-competitive assay based on the direct sandwich technique for optimal clinical sensitivity, specificity and non-specific interference for determination of the S100A1B isoform. The assay is based on an antibody specific for S100B as catcher and HRP labelled MAb specific for S100A1B dimer for detection.

The CanAg S100A1B EIA is based upon the same high quality standard of MAb from CanAg Diagnostics as all our laboratory test kit products.

SPECIFICATIONS

Results within:	4 hours
Detection limit:	< 0.03 μg/L using 50 μL sample
Sample volume:	50 μL
Hook effect:	620 nm: 5000 μg/L 405 nm: 5000 μg/L
Stability:	12 months at 4° C
Standard range:	0.050-3.2 μg/L
Incubation temp:	20–28° C
Recovery:	97–109%
Detection:	620 nm or 405 nm
Reference value:	< 0.046 μg/L