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| **S-100 Protein** | | | |
| **Synonyms** | |  | S100B, S100 |
| **Clinical Indication** | |  | S-100 is a calcium binding protein. It is present in astrocytes and glial cells and also in melanocytes. Studies suggest S100B has particular utility in staging of malignant melanoma, in establishing prognosis, in evaluating treatment success and in predicting relapse. A value greater than 0.2 µg/L is indicative of advanced disease (Stages 3 and 4) with a Positive Predictive Value of approximately 90%. Rising values can be seen 1-2 months in advance of clinical features of metastatic disease. The concentration of S100B has been shown to be related to tumour burden and gives an early indication of successful response to chemotherapy. Values that fail to fall after one month of chemotherapy indicate the tumour is insensitive to the particular chemotherapy regime.  Used in the assessment and monitoring of patients with malignant melanoma. |
| **Part of Profile / See Also** | |  |  |
| **Request Form** | |  | Combined Pathology manual Blood form or ICE request |
| **Availability / Frequency of Analysis** | |  | Referred test: Analysed by Biochemistry, King’s College Hospital if specific criteria met. |
| **Turnaround Time** | |  | 2 weeks |
| **Patient Preparation** | |  | Try to avoid sending samples for S100 on a Friday due to stability |
| **Sample Requirements** | |  |  |
| **Specimen Type** |  | Serum |
| **Volume** |  | 2 ml |
| **Container** |  | Red top (serum) tube or  Yellow top (SST) tube  Paediatric lithium heparin (Orange top – Sarstedt tube)  Paediatric plain tube (Red top – BD Microtainer) |
| **Reference Range & Units** | |  | 0.02 – 0.2 ug/L |
| **Interferences** | |  |  |
| **Interpretation & Clinical**  **Decision Value (if applicable)** | |  | A value greater than 0.2 µg/L is indicative of advanced disease (Stages 3 and 4) with a Positive Predictive Value of approximately 90%. Rising values can be seen 1-2 months in advance of clinical features of metastatic disease. The concentration of S100B has been shown to be related to tumour burden and gives an early indication of successful response to chemotherapy. Values that fail to fall after one month of chemotherapy indicate the tumour is insensitive to the particular chemotherapy regime. |
| **References** | |  | <http://www.viapath.co.uk/our-tests/protein-s100b> |
| **Test code** | |  | S100 |
| **Lab Handling** | |  | Aliquot 500ul and store in referrals rack at 4C. Sent daily by courier to King’s College, London. *If a sample is received on a Friday, please freeze at -20C over the weekend.* |