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**SIROLIMUS, WHOLE
BLOOD(LC-MS / MS)**

ug/L

Interpretation

| ORGAN TRANSPLANT | THERAPEUTIC RANGE in ug/L |
|---|----------------------------------|
| Kidney (in combination with Cyclosporine) | 4 -12 |
| Liver | 12 -20 |
| | Toxic Value: >25 |

Note:

Sirolimus Whole blood concentrations can be measured by either chromatographic (LC-MS/MS) or immunoassay (CLIA) methodologies. These two techniques are not directly interchangeable and the measured drug level depends on the methodology used. Reference ranges are different for the two methodologies. Generally CLIA has a positive bias as compared with LC-MS/MS due to cross reacting antibodies with the drug metabolites.

Comments

LC-MS/MS is considered the most sensitive, specific and precise technology for monitoring immunosuppressants. Therapeutic drug monitoring (TDM) is commonly used to help maintain drug levels within the concentration range in which the drug exerts its clinical effect with minimal adverse reactions. Sirolimus acts by suppressing cytokine driven T lymphocyte proliferation thereby inhibiting progression from G1 to S phase of the cell cycle. It is rapidly absorbed from the GI tract reaching peak concentration in whole blood in about 2 hours. It does not appear to be nephrotoxic.

Indications for testing

- Immunosuppressant dose optimization
- Failure to respond to immunosuppressants
- Signs or Symptoms consistent with inadequate or excessive immunosuppression
- Changes to concomitant medications or other variables that affect pharmacokinetics