MAYO CLINIC LABORATORIES

Hexosaminidase Test Selection Quick-Reference Comparison

Test ID	Test Name	Specimen Type	Clinical Use and Disease Coverage	Molecular Reflex	Use During Pregnancy or Hormonal Contraception	When to Choose	Important Considerations
NAGR	Hexosaminidase A and Total, Leukocytes/ Molecular Reflex, Whole Blood	Whole blood (leukocytes)	Carrier or diagnostic testing for Tay-Sachs and Sandhoff diseases	Yes	Yes	Preferred first-line option when automatic molecular follow-up is desired	Reflexes to *HEXA* or *HEXB* molecular testing when indicated
NAGW	Hexosaminidase A and Total Hexosaminidase, Leukocytes	Whole blood (leukocytes)	Carrier or diagnostic testing for Tay-Sachs and Sandhoff diseases	Yes	Yes	Choose when leukocyte enzyme testing without automatic molecular reflex is desired	Additional testing must be ordered separately on a new specimen
NAGS	Hexosaminidase A and Total Hexosaminidase, Serum	Serum	Diagnostic testing for Tay-Sachs and Sandhoff disease	No	No	Choose when a leukocyte specimen is difficult to obtain	Test ID MUGS may be added to the original specimen within one month; most other follow-up testing requires a new specimen
MUGS*	Hexosaminidase A, Serum	Serum	Secondary diagnostic testing for a suspected Tay-Sachs B1 variant; does not detect Sandhoff disease	No	No	Consider after NAGR, NAGW, or NAGS when suspicion for a Tay-Sachs B1 variant remains high	Not a first-line test; may be added to the original NAGS specimen within one month

*MUGS is a secondary test and is not intended for first-line evaluation.

Test selection should consider the clinical indication, specimen availability, pregnancy or hormonal-contraception status, and need for molecular follow-up testing. Contact Customer Service (800-533-1710) for assistance with test selection.

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