



Immunohistochemistry involving transcription factors is a highly preferred method for differential diagnosis of disease. This is due to the sensitivity, specificity, and clear nuclear visualization of immunohistochemical stains against these transcription factor proteins. Cell Marque's recent focus in antibody development has been to produce new *in vitro* diagnostic tests (such as GATA3, MyoD1, Olig2, SALL4, SOX-10, and SOX-11) targeting transcription factors to produce rich nuclear stains.

Nuclear Staining Markers:

GATA3 (L50-823) is expressed in all lobular breast carcinomas and in a high percentage of invasive ductal carcinomas; it is also negative in lung and thyroid carcinomas. GATA3 expression can also be found in primary and metastatic urothelial carcinoma, whereas the mimics of urothelial carcinoma are negative.

MyoD1 (EP212) is expressed in rhabdomyosarcoma.

Olig2 (211F1.1) is expressed in most glial tumors, such as oligodendrogliomas and astrocytomas.

SALL4 (6E3) is used in the identification of carcinomas of the genitourinary tract which includes a high sensitivity for intratubular germ cell neoplasia, seminomas/dysgerminomas, embryonal carcinomas, and yolk sac tumors.

SOX-10 (polyclonal) is very useful in the differential diagnosis of tumors of neural crest origin and melanocytic origin (especially desmoplastic melanoma) versus spindle cell carcinoma and soft tissue neoplasms.

SOX-11 (MRQ-58) is used in the identification of mantle cell lymphomas versus other small B-cell lymphomas, including SLL/CLL, FL, and MZL.