

Table S1 Summary of studies on enzymes used as tumor markers in tissues

Author, year	Enzyme	Specimen	Method of measurement	Organ/tissue (cancer)	Purpose
Ferreira <i>et al.</i> , 2013 (63)	α 2,3-sialyltransferase and α 2,6-sialyltransferase I	Paraffin-embedded tumor biopsies	IHC	Skin (keratoacanthoma, squamous cell and, basal cell carcinoma)	Diagnosis, prognosis
Cutz <i>et al.</i> , 2014 (64)	Anaplastic lymphoma kinase	Lung tumor tissues	IHC, FISH	Lungs (non-small cell lung carcinoma, etc.)	Diagnosis
Chamie <i>et al.</i> , 2015 (65)	Carbonic anhydrase-IX	Renal tumor tissues	IHC	Kidneys (clear cell renal cell carcinoma)	Prognosis
Hou <i>et al.</i> , 2016 (66)	Ubiquitin-specific protease 42	Gastric cancer tumor tissues	Q-PCR, WB	Stomach (gastric cancer)	Prognosis
Chang <i>et al.</i> , 2018 (67)	Acyl-CoA synthetase super-family 3	Gastrectomy samples	cDNA microarray	Stomach (gastric adenocarcinoma)	Diagnosis, prognosis
Chen <i>et al.</i> , 2019 (68)	Alpha kinase-1	Biopsies of oral mucosa	IHC, WB	Mouth (oral squamous cell carcinoma)	Diagnosis, prognosis
Al-saraireh <i>et al.</i> , 2021 (69)	Cytochrome 4Z1 and 1B1	Urothelial and bladder tissues	IHC	Bladder (urothelial carcinoma)	Diagnosis, prognosis

FISH, fluorescence in-situ hybridization; IHC, immunohistochemistry; PCR, polymerase chain reaction; Q-PCR, real time-PCR; WB, western blot.

Table S2 Summary of studies on enzymes used for the assessment of tissues and other conditions

Author, year	Enzyme	Specimen	Method of measurement	Condition	Purpose
Wójcik <i>et al.</i> , 2014 (70)	Phosphatidylinositol 3-kinase delta	Serum	Q-PCR	Gestational diabetes mellitus	Diagnosis, prognosis
Wegner <i>et al.</i> , 2014 (71)	Mitochondrial superoxide dismutase	Serum	Q-PCR and WB	Type 1 DM (microvascular complications)	Prognosis
Rouault <i>et al.</i> , 2021 (72)	Senescence-associated beta-galactosidase	Adipose tissue biopsies	Histochemistry	Severe obesity (altered glycemic status)	Diagnosis
Tanriverdi <i>et al.</i> , 2021 (73)	Xanthine oxidase	Keratoconus corneal epithelium	Spectrophotometry	Keratoconus	Diagnosis
Do <i>et al.</i> , 2013 (74)	Rho-kinase	White blood cells, endomyocardial biopsy	IHC and WB	Acute and chronic heart failure	Prognosis
van den Born <i>et al.</i> , 2016 (75)	Cystathionine γ -lyase	Carotid endarterectomy plaques	WB	Atherosclerosis (micro-angiogenesis)	Prognosis

DM, diabetes mellitus; IHC, immunohistochemistry; PCR, polymerase chain reaction; Q-PCR, real time-PCR; WB, western blot.