

Table SI. Primary and secondary antibodies for immunohistochemistry.

Antibody	Primary antibody					Secondary antibody					
	Dilution	Cat. no	Supplier/ company	Antigen retrieval	Temperature and duration of incubation	Clone	Dilution	Cat. no	Supplier/ company	Conjugat e	Temperature and duration of incubation
Ki-67	Predilute	ZM-0166	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	98°C 30 min	RT 40 min	MM (UMAB107)	Predilute	K8000, K8002, K8023	Dako; Agilent Technol ogies, Inc.	Peroxidas e	RT 20 min
AR	Predilute	ZM-0544	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	98°C 30 min	RT 40 min	RM (EP120)	Predilute	K8000, K8002, K8023	Dako; Agilent Technol ogies, Inc.	Peroxidas e	RT 20 min
CK7	Predilute	ZM-0071	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	98°C 30 min	RT 40 min	MM (UMAB161)	Predilute	K8000, K8002, K8023	Dako; Agilent Technol ogies, Inc.	Peroxidas e	RT 20 min
SATB2	Predilute	ZM-0163	Beijing Zhongsh an Golden Bridge Biotechn	98°C 30 min	RT 40 min	MM (UTI5H7)	Predilute	K8000, K8002, K8023	Dako; Agilent Technol ogies, Inc.	Peroxidas e	RT 20 min

CK5/6	Predilute	IR780	ology Co., Ltd. Dako; Agilent Technolo gies, Inc.	98°C 30 min	RT 40 min	MM (D5-16B4)	Predilute	K8000, K8002, K8023	Dako; Agilent Technol ogies, Inc.	Peroxidas e	RT 20 min
GATA3	Predilute	MAB-0695	Fuzhou Maixin Biotechn ology Develop ment Co., Ltd.	98°C 30 min	RT 40 min	MM (L50-823)	Predilute	K8000, K8002, K8023	Dako; Agilent Technol ogies, Inc.	Peroxidas e	RT 20 min
GCDFP-15	Predilute	ZM-0527	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	98°C 30 min	RT 40 min	RM (ER95)	Predilute	K8000, K8002, K8023	Dako; Agilent Technol ogies, Inc.	Peroxidas e	RT 20 min
MUC1	Predilute	ZM-0656	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	98°C 30 min	RT 40 min	RM (EP85)	Predilute	K8000, K8002, K8023	Dako; Agilent Technol ogies, Inc.	Peroxidas e	RT 20 min
MUC2	Predilute	ZM-0392	Beijing Zhongsh an Golden Bridge Biotechn	98°C 30 min	RT 40 min	MM (Ccp58)	Predilute	K8000, K8002, K8023	Dako; Agilent Technol ogies, Inc.	Peroxidas e	RT 20 min

MUC6	Predilute	MAB-0823	ology Co., Ltd. Fuzhou Maixin Biotechn ology Develop ment Co., Ltd. Fuzhou Maixin Biotechn ology Develop ment Co., Ltd.	98°C 30 min	RT 40 min	MM (MRQ-20)	Predilute	K8000, K8002, K8023	Dako; Agilent Technol ogies, Inc.	Peroxidas e	RT 20 min
MUC5A C	Predilute	MAB-0079	ology Co., Ltd. Fuzhou Maixin Biotechn ology Develop ment Co., Ltd.	98°C 30 min	RT 40 min	MM (45M1)	Predilute	K8000, K8002, K8023	Dako; Agilent Technol ogies, Inc.	Peroxidas e	RT 20 min
ER	Predilute	790-4325	Roche Diagnost ics	95°C 64 min	36°C 16 min	RM (SP1)	Predilute	(92) 760-500	Roche Diagnost ics GmbH	Peroxidas e	RT 8 min
PR	Predilute	790-4296	Roche Diagnost ics	95°C 64 min	36°C 16 min	MM (1E2)	Predilute	(92) 760-500	Roche Diagnost ics GmbH	Peroxidas e	RT 8 min
Her-2	Predilute	790-4493	Roche Diagnost ics	95°C 64 min	36°C 16 min	MM (4B5)	Predilute	(92) 760-500	Roche Diagnost ics GmbH	Peroxidas e	RT 8 min
P53	Predilute	ZM-0408	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	95°C 64 min	36°C 20 min	MM (D0-4)	Predilute	(92) 760-500	Roche Diagnost ics GmbH	Peroxidas e	RT 8 min

EGFR	Predilute	ZM-0505	Beijing Zhongshan Golden Bridge Biotechnology Co., Ltd.	95°C 64 min	36°C 24 min	RM (EP22)	Predilute	(92) 760-500	Roche Diagnostics GmbH	Peroxidase	RT 8 min
PAX-8	Predilute	ZM-0468	Beijing Zhongshan Golden Bridge Biotechnology Co., Ltd.	95°C 64 min	36°C 40 min	MM (OTI6H8)	Predilute	(92) 760-500	Roche Diagnostics GmbH	Peroxidase	RT 8 min
CK20	Predilute	PA0022	Leica Microsystems GmbH	ER2 100°C 20 min	RT 15 min	MM (KS20.8)	Predilute	DS9800	Leica Microsystems GmbH	Peroxidase	RT 8 min
CDX-2	Predilute	PA0375	Leica Microsystems GmbH	ER2 100°C 20 min	RT 15 min	MM (EP25)	Predilute	DS9800	Leica Microsystems GmbH	Peroxidase	RT 8 min
CK14	Predilute	PA0074	Leica Microsystems GmbH	ER1 100°C 20 min	RT 15 min	MM (LL002)	Predilute	DS9800	Leica Microsystems GmbH	Peroxidase	RT 8 min
p63	Predilute	ZM-0406	Beijing Zhongshan Golden Bridge Biotechnology Co., Ltd.	103°C 30 min	RT 40 min	MM (UMAB4)	Predilute	UM-9002	Beijing Zhongshan Golden Bridge Biotechnology Co., Ltd.	Peroxidase	RT 20 min

PMS-2	Predilute	ZM-0407	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	105°C 35 min	RT 40 min	MM (OTI4B2)	Predilute	UM-9002	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	Peroxidas e	RT 20 min
MSH-2	Predilute	ZA-0702	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	105°C 25 min	RT 30 min	RM (OTIR1B12)	Predilute	UM-9002	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	Peroxidas e	RT 20 min
MSH-6	Predilute	ZA-0541	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	105°C 25 min	RT 30 min	RM (EP49)	Predilute	UM-9002	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	Peroxidas e	RT 20 min
MLH-1	Predilute	ZM-0152	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	105°C 35 min	RT 30 min	MM (OTI4H4)	Predilute	UM-9002	Beijing Zhongsh an Golden Bridge Biotechn ology Co., Ltd.	Peroxidas e	RT 15 min

RT, room temperature; MM, mouse monoclonal; RM, rabbit monoclonal.