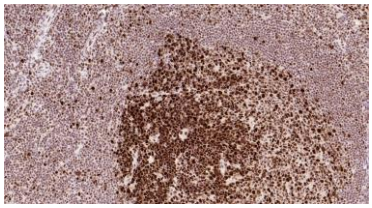
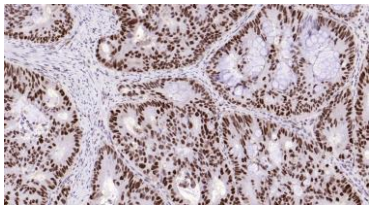
Anti-MSH2, rabbit monoclonal (BSR77)

BSH-4018-100 (0.1 ml), BSH-4018-1 (1 ml)

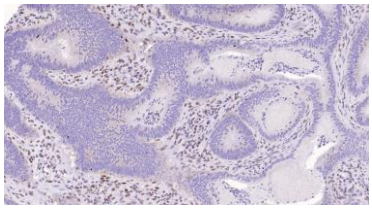
Clonality:	Rabbit monoclonal antibody
Clone:	BSR77
Application:	IHC-P (1:100 – 1:400)
Species Reactivity:	Human
Control tissues:	Tonsil, Colon adenoCA with and without mutation
Buffer:	TRIS with 0.03% sodium azide, pH 7.2
Storage:	Store at 4°C



Tonsil has been stained with anti-MSH2 (BSR77). Tissue exhibits strong nuclear staining in germinal center B-cells and weak to moderate staining in mantel zone B-cells.



Colon adenocarcinoma without mutation to MSH2 gene stained with anti-MSH2 (BSR77) antibody. Strong staining reaction is seen in all neoplastic cell nuclei.



Colon adenocarcinoma with mutation to MSH2 gene stained with anti-MSH2 (BSR77) antibody. No staining reaction in the nuclei of neoplastic cells, but stromal cells show distinct nuclear staining.

Description

MSH2 (MutS Homologue 2) is one of the five key genes (besides MLH1, PMS1, PMS2, MSH6) of the Mis-Match Repair family (MMR). These genes encode MMR proteins, a group of nuclear enzymes that initiates repair of base-base mismatch, that can occur in DNA replication. MMR nuclear proteins form heterodimers, that bind abnormal DNA and initiates its removal. Loss of MMR proteins lead to accumulation of DNA replication errors in the proliferating cells. The above mentioned MMR genes have clinical interest, as they may mutate in families with hereditary non-polyposis colorectal cancer (HNPCC). About 3-5% of all colorectal carcinomas are related to MMR protein mutation. Carriers of an MLH1 or MSH2 mutation have a more than 70% lifetime risk of developing a colorectal carcinoma, with increased risk of developing endometrial carcinomas (50%). Staining for MLH1, MSH2 and MSH6 in colorectal carcinomas should be carried out in patients < 55 years-of-age or with a family history of these tumors.

Protocol

1. Deparaffinize and rehydrate tissue section
2. Wash: aqua dest, 2×5 min
3. Pre-treatment: PT-module HIER pH 9.0 (20min at 98°C)
4. H_2O_2 (concentration 3%), 10 min
5. Wash: PBS or TBS buffer, 2×5 min
6. Primary antibody diluted as recommended, 30 min
7. Wash: PBS or TBS buffer, 2×5 min
8. One step HRP-polymer detection, 30 min
9. Wash: PBS or TBS buffer, 2×5 min
10. DAB Substrate, 8 min
11. Wash: aqua dest, 2×2 min
12. Counterstain, dehydrate and coverslip

Dilution of concentrated antibody depends on the pre-treatment method and detection system used. Above protocol used in Optibodies evaluation and is meant as a reference. Final working dilution and protocol applied needs to be determined by the user always.