PRODUCT INFORMATION

Cat. No. SQM001.1 (50µg)

Monoclonal Antibody to O^6-Ethyl-2-deoxyguanosine (ER 6)

- Detects a specific mutagenic DNA modification induced by several exogenous and endogenous carcinogens e.g. food, smoking, cancer therapeutics, environmental carcinogens, workplace carcinogens
- Molecular epidemiology of carcinogen exposure
- Pre- and intratherapeutic dosimetry of exposure to anticancer agents
- Basic research of molecular mechanisms of carcinogenesis
- Mutagenicity testing of substances

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Product Data

Catalogue no:	SQM001.1
Product name:	ER 6, Monoclonal Antibody to O^6-ethyl-2-deoxyguanosine
Product size:	50 µg
Tested with:	human, mouse, rat
Clone:	ER 6
Isotype:	rat IgG2b
Formulation:	lyophilized
Reconstitution and storage:	Store lyophilized product at -20°C until opened. After opening, restore with 0.5 ml PBS/NaN_3/1% BSA to a final concentration 100 µg Mab/ml. After dilution, do not use for more than one day. For extended storage after reconstitution we suggest aliquoting and storage at –20°C
Immunogen:	O^6-ethyl-2-deoxyguanosine
Purification:	The antibody was isolated from supernatant by Protein G affinity purification
Application tested:	Competitive Radioimmunoassay ELISA: 0.1 – 0.5 µg/ml PBS containing 3% bovine serum albumin Immuno-Slot-Blot-Assay Oligonucleotide Repair Assay Immunoaffinity/Quantitative PCR Immunocytochemistry: 0.1 - 0.5 µg/ml PBS containing 3% bovine serum albumin

Specifity of Mab ER 6, measured by the competitive radioimmunoassay (RIA)

Affinity constant for O^6-Ethyl-2-deoxyguanosine:	**2.0×10^{10} (l/Mol)**
RIA-detection limit for:	*(pMol)*
O^6-EtdGuo	0.04
O^6-EtGuo	0.88
O^6-EtGua	2.0
O^6-EtdGMP	0.09
7-EtdGuo	840
O^4-EtdThd	1080
O^6-MedGuo	6.9
O^6-BudGuo	3.3
DGuo	1.5×10^5
DAdo	1.5×10^5
DIno	1.5×10^5
DPyr	5.0×10^5
DNA-Hydrolysate	1.0×10^5

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References

1. Mientjes et al. Formation and persistence of O^6-ethylguanine in genomic and transgene DNA in liver and brain of lacZ transgenic mice treated with N-ethyl-N-nitrosourea. Carcinogenesis (1996); 11, 2449-2454.
2. Bender et al. Binding and repair of O^6-ethylguanine in double-stranded oligodeoxynucleotides by recombinant human O^6-alkylguanine-DNA alkyltransferase do not exhibit significant dependence on sequence context. Nucleic Acids Research (1996); 11, 2087-2094.
3. Engelbergs et al. Fast repair of O^6-ethylguanine, but not O^6-methylguanine, in transcribed genes prevents mutation of H-ras in rat mammary tumorigenesis induced by ethylnitrosourea in place of methylnitrosourea. Proc. Natl. Acad. Sci. USA (1998); 95, 1635-1640.
4. Goto et al. Mutagenicities of N-nitrosodimethylamine and N-nitrosodiethylamine in Drosophila and their relationship to the levels of O-alkyl adducts in DNA. Mutation Research (1999); 425, 125-134.

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