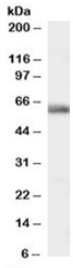
MYH1 Antibody / MUTYH Polyclonal Antibody (R34210)

Catalog No.	Formulation	Size
R34210-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Species Reactivity	Human
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	4595
Applications	Western blot: 0.1-0.3ug/ml ELISA (peptide) LOD: 1:16000
Limitations	This MYH1 Antibody / MUTYH Polyclonal Antibody is available for research use only.



MYH1 Antibody WB Analysis of Human Bone Marrow Lysate. Western blot analysis of human bone marrow lysate using MUTYH Polyclonal Antibody at 0.1 ug/ml. A distinct immunoreactive band is detected near 55-60 kDa, consistent with the predicted molecular weight of approximately 60 kDa for MUTYH.

Description

MYH1 Antibody / MUTYH Polyclonal Antibody targets MUTYH, a DNA glycosylase involved in the recognition and repair of oxidative DNA damage. Also known as the human MutY homolog, MUTYH is an important component of the base excision repair pathway, which removes damaged or incorrectly incorporated bases from DNA. Its activity helps prevent mutations arising from oxidative stress and contributes to the maintenance of nuclear and mitochondrial genome integrity.

One of the principal substrates associated with MUTYH function is adenine incorrectly paired with 8-oxo-7,8-dihydroguanine (8-oxoG), an oxidized form of guanine. This lesion can arise when reactive oxygen species damage DNA. During replication, 8-oxoG may pair with adenine rather than cytosine, creating a mismatch that can

ultimately produce a G to T transversion mutation. MUTYH recognizes the mismatch and removes the mispaired adenine, initiating a repair process that allows the correct base pairing to be restored.

MUTYH operates alongside other proteins involved in oxidative DNA damage control. OGG1 removes oxidized guanine when paired with cytosine, while NUDT1, commonly called MTH1, hydrolyzes oxidized nucleotides to limit their incorporation into DNA. These complementary activities reduce the mutagenic consequences of oxidative damage. MUTYH also interacts with proteins associated with DNA replication and repair, helping coordinate its activity with cellular mechanisms that preserve genetic information.

Alternative transcription initiation and RNA processing generate several MUTYH protein isoforms with different N-terminal sequences. These variations influence protein localization, including distribution between the nucleus and mitochondria. Published studies have identified multiple MUTYH-reactive protein forms with apparent molecular weights in the approximately 50-65 kDa range. The presence of distinct protein forms reflects the complexity of MUTYH regulation, although individual immunoreactive bands require additional validation before they can be assigned to particular isoforms.

Inherited defects in MUTYH are associated with MUTYH-associated polyposis, an autosomal recessive colorectal cancer predisposition syndrome. Individuals carrying pathogenic variants in both copies of MUTYH have an increased risk of colorectal adenomas and cancer because impaired oxidative DNA repair permits the accumulation of characteristic mutations. MYH1 Antibody supports research into MUTYH expression, oxidative DNA repair, and the relationship between defective base excision repair and colorectal tumor development.

For an alternative antibody with knockout validation and additional experimental characterization, explore our MUTYH Antibody targeting the DNA glycosylase responsible for removing adenine mispaired with oxidized guanine.

Application Notes

Optimal dilution of the MYH1 Antibody / MUTYH Polyclonal Antibody should be determined by the researcher.

Immunogen

Amino acids HISTDAHSLNSAAQ were used as the immunogen for this MYH1 antibody.

Storage

Aliquot and store the MYH1 antibody at -20oC.

Alternate Names

MUTYH antibody, MutY homolog antibody, Human MutY homolog antibody, hMYH antibody, Adenine DNA glycosylase MYH1 antibody, MUTYH DNA glycosylase antibody, MutY DNA glycosylase antibody, MUTYH base excision repair antibody, MUTYH oxidative DNA repair antibody, MUTYH-associated polyposis protein antibody

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