Anti-$(HIS)_6$ TAG Epitope Tag Antibody - FITC-conjugated Mouse Monoclonal Antibody Clone 13/45/31-2

Product Information

Catalog No.:	**DIA-900-FITC (1 ml)**
Clone:	13/45/31-2
Quantity	100 Test / (10µl/test)
Isotype:	Mouse IgG1, kappa
Specificity:	Recognizes N-terminal, C-terminal or internal HIS-tagged fusion proteins with at least 6 histidine residues
Immunogen:	Recombinant (HIS)6-p53 protein
Species Reactivity:	Not Applicable
Physical State:	Liquid
Positive Control:	$(HIS)_6$-protein (not included)
Presentation:	FITC-conjugated mouse IgG1 for 100 tests in PBS with 6% BSA (IgG/Protease-free), 0.05% NaN3. Antibody purified from cell culture supernatant
Sensitivity:	WB: 1ng HIS-tagged protein
Affinity:	3x 10-10M (Biacore™ Analysis)

Applications	**Dilution**
Flow Cytometry	10 µl/10^6 cells
IHC-frozen	1:10 – 1:50
Immunofluorescence	1:10 – 1:50

General recommendations, optimal dilutions should be determined by the end user by titration.

Reactivity

The mouse monoclonal anti-$(His)_6$-tag antibody, clone 13/45/31-2 (H. Zentgraf/DKFZ Heidelberg, Germany), specifically detects any kind of histidine-tagged proteins in cells and complex cellular lysates. This monoclonal antibody specifically reacts with recombinant proteins containing an epitope of at least 6 histidine residues, located at the N-terminus, C-terminus or internally. A higher number of histidine residues leads to an increased binding affinity of the antibody, e.g. an expression construct with 10 histidine residues increases the affinity about 10- to 20-fold. Additional flanking amino acids are not required for antibody binding, therefore enabling the choice of many different expression vectors on the only condition that the TAG-epitope is sterically available.

Background

Recombinant proteins are utilized for various purposes in molecular biology. Many prokaryotic expression vectors have been established enabling synthesis of the protein of interest as a fusion with a peptide, thus facilitating purification. Expression of recombinant proteins in E. coli as a fusion protein that includes histidine residues (His) as tag is one of the most popular methods, because histidine tagged proteins have useful attributes. The affinity of the histidine-tag motif to Ni2+ by chelation is strong and selective enough to enable purification of the protein to homogeneity by affinity chromatography on a Ni2+-NTA adsorbant and the resulting protein can be selectively detected using antibodies such as clone 13/45/31-2.

References

The Antibody clone 13/45/31-2 /13/45/31 is with **more than 100 citations** one of the most cited His-Tag Antibodies world wide. For a comprehensive list of citations visit:
https://www.dianova.com/his-references/

Initial Publication:

1. Zentgraf H, Frey M, Schwinn S, Tessmer C, Willemann B, Samstag Y, Velhagen I. Detection of histidine-tagged fusion proteins by using a high-specific mouse monoclonal anti-histidine tag antibody. Nucleic Acids Res.16,3347-8, 1995.

Storage and Stability

Do not freeze. Product is stable for 1 year from the date of shipment when stored at 2-8 °C. Does not contain stabilizers and preservatives. Please handle under sterile contditons to avoid contamination.

BIOZOL GmbH
Leipziger Str.4
D-85386 Eching
Germany

www.biozol.de
info@biozol.de
+49 (0)89 - 3799 666 6

Instructions for use

Following dilutions are recommended

Flow Cytometry	10 µl/10^6 cells
IHC-frozen	1:10 – 1:50
Immunofluorescence	1:10 – 1:50

The optimal dilution should be determined by the end user by titration.

Buffer recommendations

Incubate the antibody in the presence of BSA!
For antibody incubation the total protein concentration of the dilution buffer should not be less than 0.2mg/ml!

Recommended dilution buffer: PBST + 5% BSA.

Safety Notes

The material contains 0.05% sodium azide as preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material. Avoid skin and eye contact, inhalation, and ingestion. For more information please refer to the Material Safety Datasheet (MSDS).

BIOZOL GmbH
Leipziger Str.4
D-85386 Eching
Germany

www.biozol.de
info@biozol.de
+49 (0)89 - 3799 666 6