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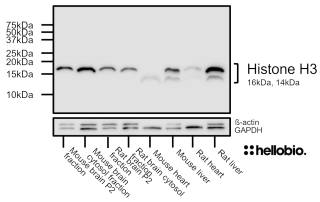
DATASHEET

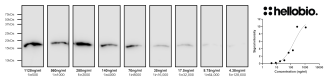
Anti-Histone H3 antibody ValidAb™

Product overview

Name	Anti-Histone H3 antibody ValidAb™
Cat No	HB6980
Host	Rabbit
Clonality	Polyclonal
Target	Histone H3
Description	Antibody to Histone H3 - Histone protein used as a loading control for western blotting. Part of the ValidAb™ range of highly validated, data-rich antibodies.

Validation data





Product information

Immunogen	Synthetic peptide consisting of residues from within the C-terminus of human Histone H3. The sequence of the immunogen is: REIRRYQKSTELLIRKLPFQRLMREIAQDFKTDLRFQSSAVMALQEA CESYLVGLFEDTNLCVIHAKRVTIMPKDIQLARRIRGERA
Isotype	IgG
Purification	Immunogen affinity chromatography
Concentration	0.56 mg/mL
Formulation	PBS with 0.01% thiomersal and 50% glycerol, pH7.3
Predicted species reactivity	Mouse, Rat, Human
Tested species reactivity	Mouse, Rat

Tested applications

Applications	WB
Western blot optimal concentration	280ng/ml (1:2,000 dilution) as tested in a rat brain cytosol preparation
Positive control	Histone H3 is found in the nucleus of all cell types therefore any tissue or cell line can serve as a positive control.
Negative control	Any negative control tissues or cells must not contain any nuclei therefore red blood cells or platelets can work well in adittion to samples that have undergone subcellular fractionation to remove any nuclei.
Open data link	Please follow this link to OSF.

Target information

Other names	H3F3, H3

UniProt ID	A2348
Gene name	H3-4
NCBI full gene name	H3.4 histone, cluster member
Entrez gene ID	8290
Amino acids	136 (15.5kDa)
Isoforms	Histone H3 has 21 family members with this antibody having an immunogen based upon Histone H3.1t. This family member has no known isoforms. Please note that this antibody is not isoform specific.
Expression	Histone H3 is a ubiquitous protein that is expressed in almost all eukaryotic cells throughout the body. It is found in the nuclei of cells in various tissues and organs, including but not limited to the brain, heart, liver, lungs, kidneys, and skin.
Subcellular expression	Histone H3 proteins are expressed in the nucleus where they form the structure of chromatin around which DNA wounds.
Target function	Histone H3 is a key protein involved in the organization and packaging of DNA into a compact structure called chromatin in eukaryotic cells. It plays a critical role in regulating gene expression by determining the accessibility of DNA to transcription factors and other regulatory proteins. Additionally, histone H3 is subject to various post-translational modifications, such as methylation, acetylation, and phosphorylation, which are important for epigenetic regulation and influence chromatin structure and function.
Processing	Prior to forming an active conformation the initiator methionine is removed.
Post translational modifications	Histone H3 proteins are subject to numerous post-translational modifications which mediate epigenetic control of gene expression. These modifications include methylation, acetylation and phosphorylation on multiple residues amongst other modifications.
Homology (compared to human)	Compared to human Histone H3.1t: • Histone H3.1 was the closest homologue in mice with a 97.1% identity score • Histone H3.1t was the closest homologue in rats with a 97.1% identity score.
Similar proteins	In a BLAST search no non-Histone H3 family members were identified as having significant homology with Histone H3.1t
Epitope homology (between species)	A BLAST search of the immunogen reveals a 96.55% homology with mouse and rat Histone H3.1
Epitope homology (other proteins)	A BLAST search of the immunogen shows that the only proteins with homology to it are Histone H3 family members.

Storage & Handling

Storage instructions	-20°C
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

References

Interactions With Histone H3 & Tools to Study Them.

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The double face of the histone variant H3.3.

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