beta-galactosidase

CONTACT INFORMATION:	CNB-CSIC Protein Tools Unit. Centro Nacional de Biotecnología/CSIC
STATUS:	Validated
TYPE:	rat anti E.coli
CLONE NAME:	3A9A
PROTEIN:	Beta-galactosidase
PROTEIN WEB:	http://www.ncbi.nlm.nih.gov/protein/18073591
ANTIGEN USED:	Beta-gal-monomer-KLH
FUSION PARTNER:	NS1/Ag4-1 (NS1) cells
ISOTYPE:	IgG2b
SPECIES REACTIVITY:	N/A
PREPARATION AND STORAGE:	Aliquot and store at 4C. Do not freeze
APP RECOMMENDED:	IHQ-paraffin, WB, IF
APP NO RECOMMENDED:	IHQ-frozen
APP NO TESTED:	IP, Flow cytometry

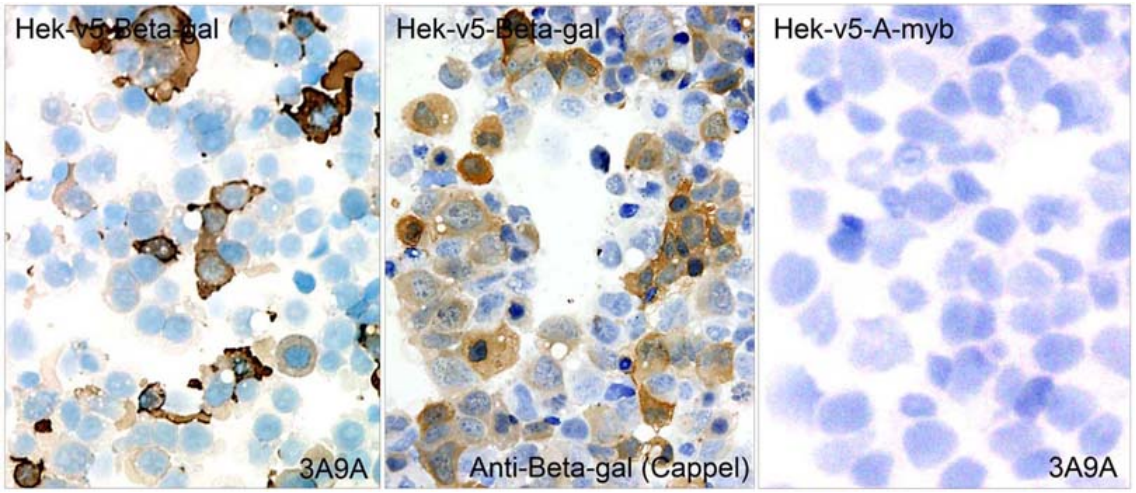
DESCRIPTION

Beta galactosidase is coded by a gene (lac z) in the lac operon of Escherichia coli. It is a metalloenzyme that splits lactose into glucose and galactose. It hydrolyzes terminal, non-reducing beta-D-galactose residues in beta-D-galactosides.

APPLICATIONS

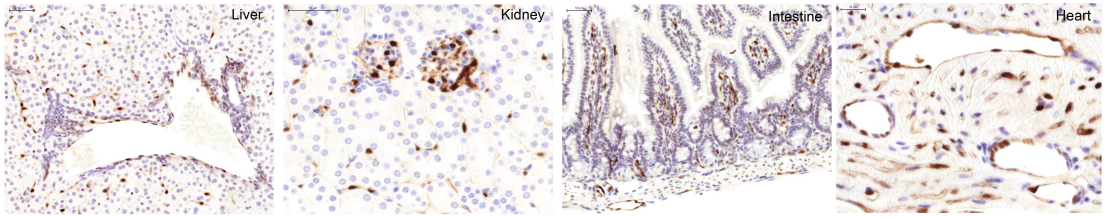
IHC Techniques	Clone	Dilution	Antibody concentration	Antigen retrieval method	Visualization kit	Positive control	Negative control	Protein localization	Positivity in other species
Frozen tissue and cytospins									
Paraffin tissue									

Recommended	3A9A	1:5	supernatant	Discovery Xt CC1 OmniMap	Ventana	beta-gal expressing tissue			
Immunofluorescence									
Recommended	3A9A	neat	supernatant			beta-gal expressing tissue			

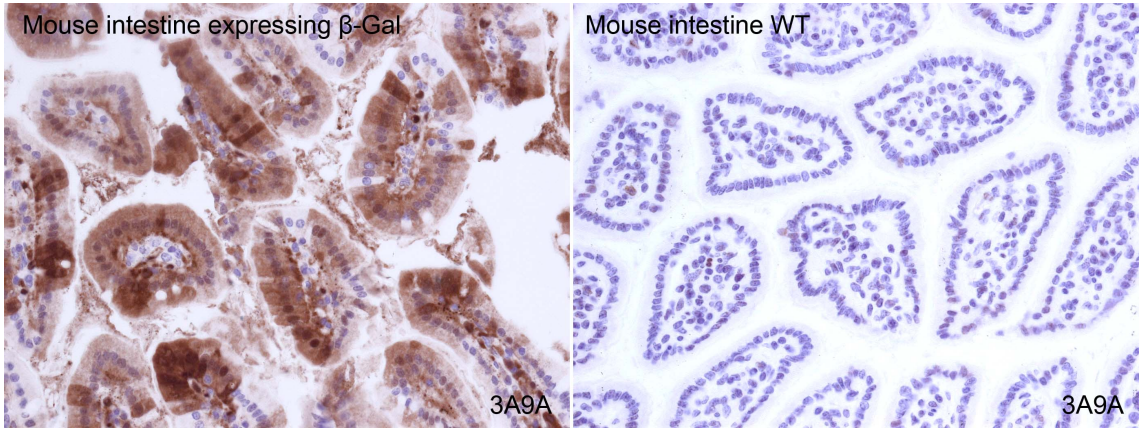


Beta-gal antibody (3A9A) in transfected cells

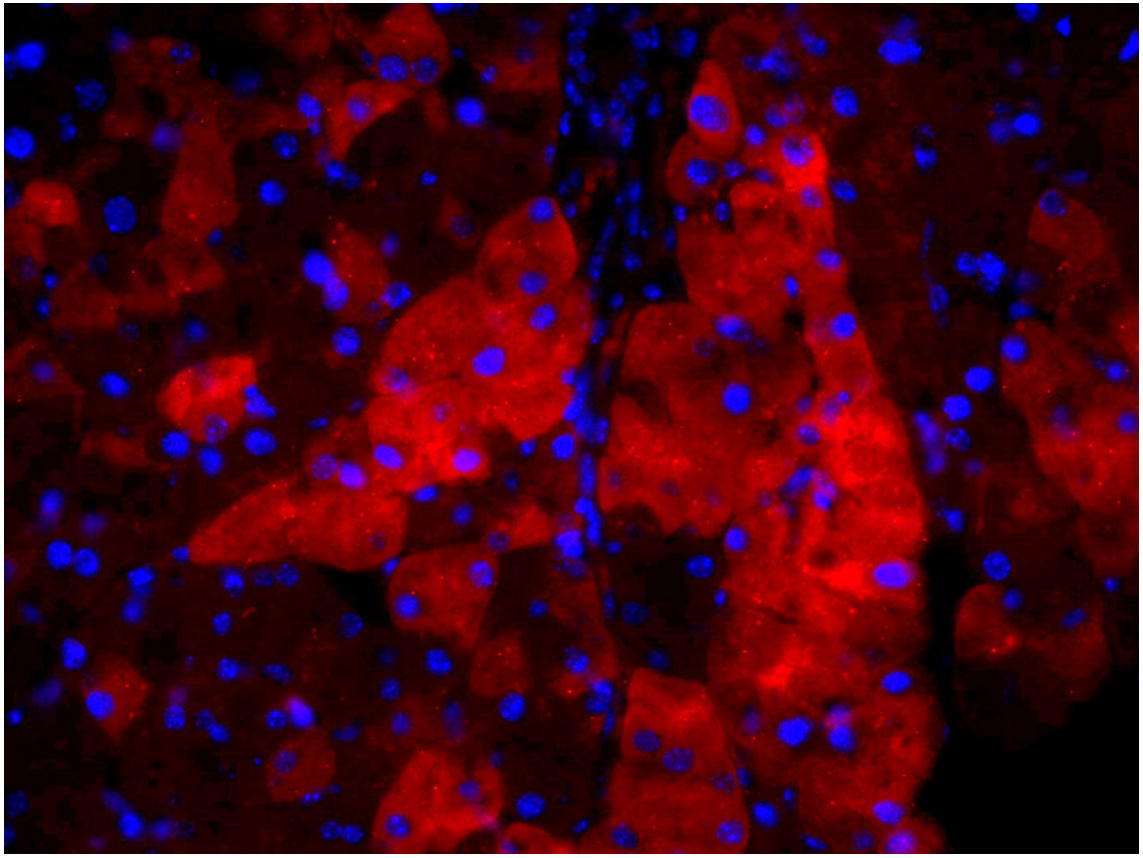
Validation of 3A9A monoclonal antibody in Hek-V5-Beta-gal transfected cells. Anti Beta-gal (Cappel) was used as positive control. Hek-v5-A-myb transfected cells were used as negative control.



Anti-beta-gal (Clone 3A9A) immunohistochemistry in mouse paraffin tissues.
In the present mouse model, Beta galactosidase expression is restricted to endothelial blood vessels.

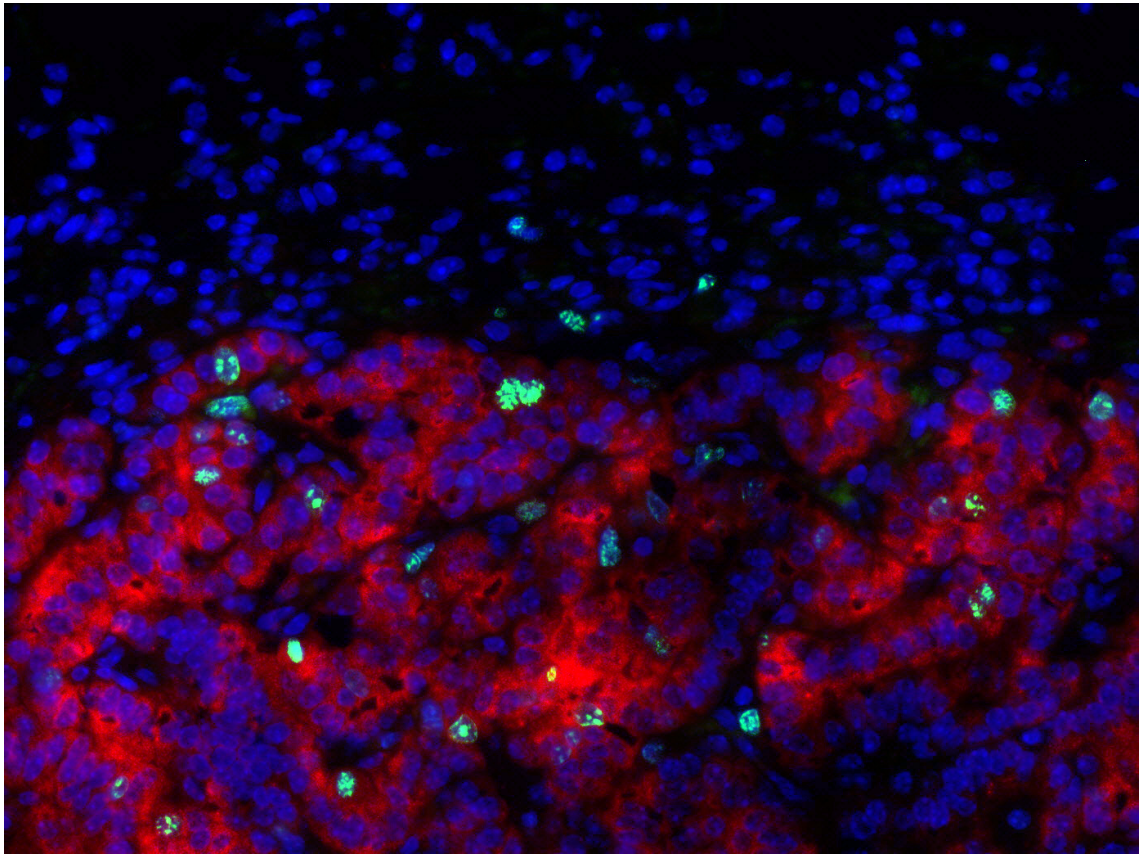


Beta-Gal expression in mouse paraffin tissue.
Rat monoclonal 3A9A can be used to detect Beta-Gal over expression on mouse paraffin sections. Intestine of a mouse expressing ?-Gal driven by the Rosa26 promoter and wild type mouse intestine.



Expression of Beta-gal (3A9A) antigen by mouse pancreatic cells.

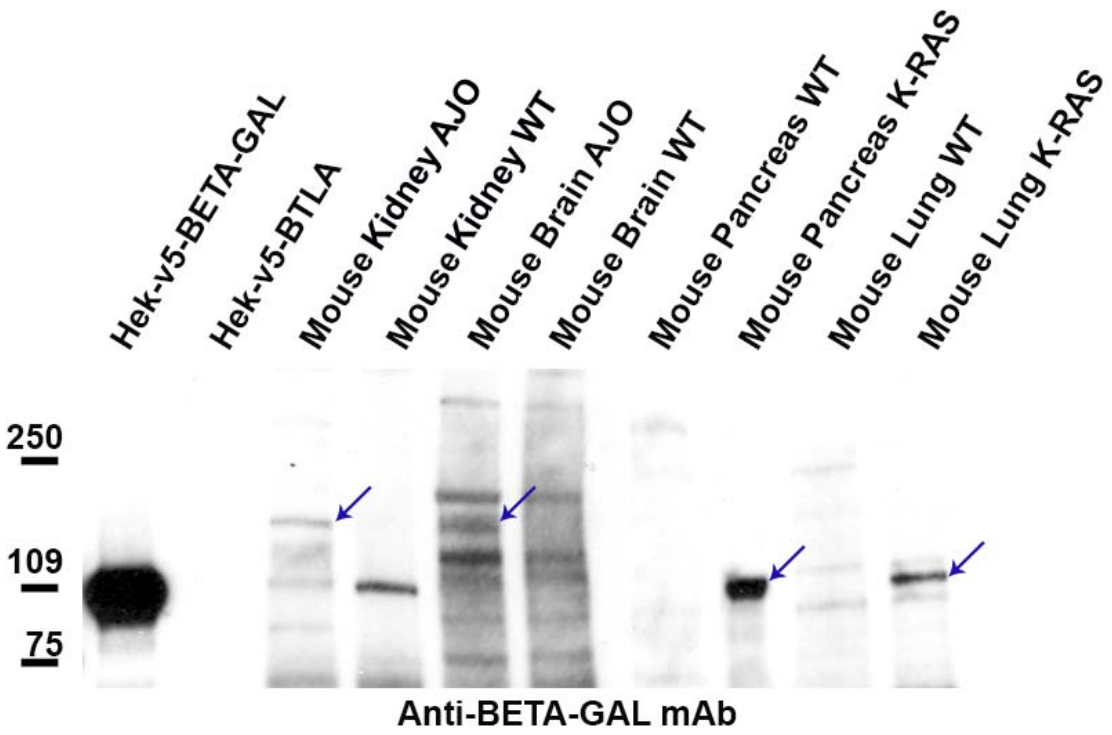
Pancreas of a knockin mouse line expressing Beta-Gal driven by the K-Ras promoter (?-Gal expression can be observed in a small number of pancreatic cells).



Beta gal expression in mouse adenoma.

Beta gal (Red) and KI-67 (green) in mouse kras driven adenoma.

WB Techniques	Clone	Dilution	Antibody concentration	Positive control	Negative control	Expected MW	Observed Mw	Positivity in other species
Western Blotting								
Recommended	3A9A	neat	supernatant			110		
Immunoprecipitation								



Biochemical characterization of anti-Beta-gal (3A9A) monoclonal antibody

Western blot analysis of Beta-gal expression in total protein extracts from transfected cells and transgenic mice expressing beta-gal protein.

Lane 1 Hek-v5-beta-gal transfected cells (20ug) (+)

Lane 2 Hek-v5-BTLA transfected cells (20ug) (-)

Lane 3 Mouse kidney extract expressing beta-gal (100ug) (+)

Lane 4 Mouse kidney extract (100ug) (-)

Lane 5 Mouse brain extract expressing beta-gal (100ug) (+)

Lane 6 Mouse brain extract (100ug) (-)

Lane 7 Mouse pancreas extract expressing beta-gal (100ug) (+)

Lane 8 Mouse pancreas extract (100ug) (-)

Lane 9 Mouse lung extract expressing beta-gal (100ug) (+)

Lane 10 Mouse lung extract (100ug) (-)