abcam

ab239014

Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR14588
Purification technique	Affinity purification Protein A
Concentration	1.035 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	-

Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information ANP32B

Function	Multifunctional protein that is involved in the regulation of many processes including cell proliferation, apoptosis, cell cycle progression or transcription (PubMed:18039846, PubMed:20015864). Regulates the proliferation of neuronal stem cells, differentiation of leukemic cells and progression from G1 to S phase of the cell cycle. As negative regulator of caspase-3-dependent apoptosis, may act as an antagonist of ANP32A in regulating tissue homeostasis (PubMed:20015864). Exhibits histone chaperone properties, able to recruit histones to certain promoters, thus regulating the transcription of specific genes (PubMed:18039846, PubMed:20538007). Also plays an essential role in the nucleocytoplasmic transport of specific mRNAs via the uncommon nuclear mRNA export receptor XPO1/CRM1 (PubMed:17178712). Participates in the regulation of adequate adaptive immune responses by acting on mRNA expression and cell proliferation (By similarity). (Microbial infection) Plays an essential role in influenza A and B viral genome replication (PubMed:31217244, PubMed:33045004). Also plays a role in foamy virus mRNA export from the nucleus to the cytoplasm (PubMed:21159877).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab239014 is the carrier-free version of ab200836.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	PHAPI2 also known as APRIL is a protein with various roles in cellular mechanisms. The protein has a molecular mass of around 32 kDa and it is found in many tissues including the spleen liver and lymph nodes. PHAPI2 acts as part of the tumor necrosis factor ligand superfamily where it influences cell proliferation and survival. This protein interacts with receptors such as BCMA and TACI impacting immune system functions.
Biological function summary	PHAPI2 regulates immune system processes by playing a role in B cell development and activity. It functions as part of larger protein complexes binding with proteins such as BCMA to influence signaling pathways. The interactions within these complexes help modulate processes critical for proper immune response and maintenance of immune system homeostasis.
Pathways	PHAPI2 is deeply involved in both the NF-kB signaling pathway and the PI3K/AKT pathway. These pathways are essential for cellular growth survival and proliferation. Through its involvement PHAPI2 also connects with proteins like NF-kB and AKT1 which are key regulatory proteins within these pathways. This connection enables PHAPI2 to act as a node integrating signals for various cellular responses.
Associated diseases and disorders	PHAPI2 associations include autoimmune diseases and cancer. Aberrant expression or mutations in PHAPI2 are linked to conditions like systemic lupus erythematosus and certain B cell malignancies. Through these disorders PHAPI2 interacts with proteins such as BAFF and CD40 which are important for disease progression and immune dysregulation. This makes PHAPI2 a potential therapeutic target for intervention in these conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

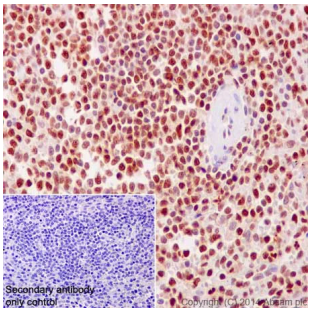
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

13 product images



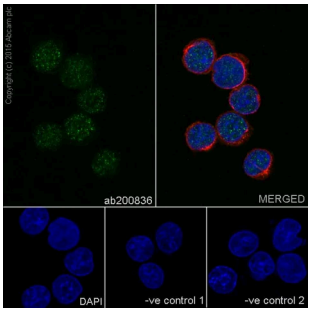
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free (ab239014)

PHAPI2 / APRIL Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PHAPI2 / APRIL antibody

Immunohistochemical analysis of paraffin-embedded Human spleen tissue labeling PHAPI2 / APRIL with ab200836 at 1/250 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution. Nuclear staining on Human spleen tissue is observed. Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab200836).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

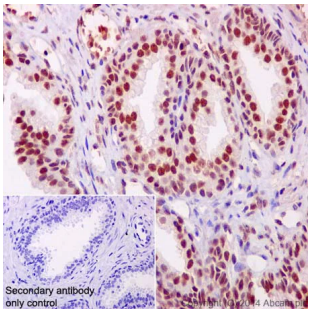


Immunocytochemistry/ Immunofluorescence - Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free (ab239014)

PHAPI2 / APRIL Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PHAPI2 / APRIL antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Jurkat (Human T cell leukemia cells from peripheral blood) cells labeling PHAPI2 / APRIL with ab200836 at 1/500 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green). Nuclear and cytoplasmic staining on Jurkat cell line is observed. The nuclear counter stain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).
The negative controls are as follows;
-ve control 1: ab200836 at 1/500 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab200836).



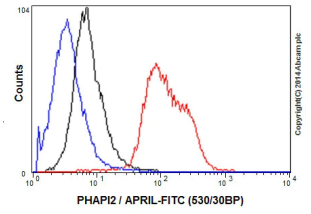
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free (ab239014)

PHAPI2 / APRIL Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PHAPI2 / APRIL antibody

Immunohistochemical analysis of paraffin-embedded Human prostatic hyperplasia tissue labeling PHAPI2 / APRIL with ab200836 at 1/250 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution. Nuclear staining on Human prostatic hyperplasia tissue is observed. Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab200836).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

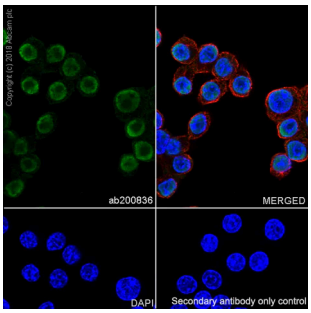


Flow Cytometry (Intracellular) - Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free (ab239014)

PHAPI2 / APRIL Flow Cytometry (Intracellular) staining using rabbit Anti-PHAPI2 / APRIL antibody

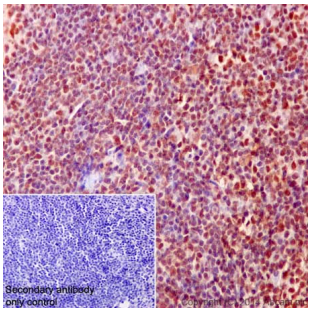
Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed Jurkat (Human T cell leukemia cells from peripheral blood) cells labeling PHAPI2 / APRIL with ab200836 at 1/180 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/150 dilution was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab200836).



Immunocytochemistry/ Immunofluorescence - Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free (ab239014)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Raw264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) cells labeling PHAPI2 / APRIL with ab200836 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). The nuclear counter stain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab195889 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/200 dilution (red). Confocal image showing mostly nuclear staining in Raw264.7 cell line.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab200836).



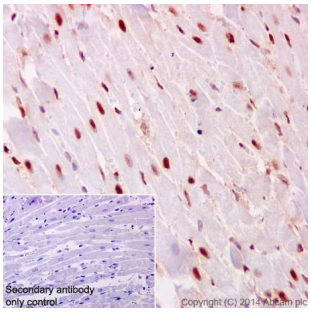
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free (ab239014)

PHAPI2 / APRIL Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PHAPI2 / APRIL antibody

Immunohistochemical analysis of paraffin-embedded Mouse spleen tissue labeling PHAPI2 / APRIL with ab200836 at 1/250 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution. Nuclear staining on Mouse spleen tissue is observed. Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab200836).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



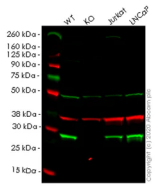
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free (ab239014)

PHAPI2 / APRIL Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PHAPI2 / APRIL antibody

Immunohistochemical analysis of paraffin-embedded Rat cardiac muscle tissue labeling PHAPI2 / APRIL with ab200836 at 1/250 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution. Nuclear staining on Rat cardiac muscle tissue is observed. Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab200836).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free (ab239014)

PHAPI2 / APRIL Western blot staining using rabbit Anti-PHAPI2 / APRIL antibody

This data was developed using the same antibody clone in a different buffer formulation (ab200836).
Lanes 1-4: Merged signal (red and green). Green - ab200836 observed at 29 kDa. Red - loading control ab8245 observed at 36 kDa.

ab200836 Anti-PHAPI2 / APRIL antibody [EPR14588] was shown to specifically react with PHAPI2 / APRIL in wild-type HEK293T cells. Loss of signal was observed when knockout cell line ab266818 (knockout cell lysate ab257831) was used. Wild-type and PHAPI2 / APRIL knockout samples were subjected to SDS-PAGE. ab200836 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-PHAPI2 / APRIL antibody [EPR14588] (ab200836) at 1/1000 dilution

Lane 1:
Wild-type HEK293T cell lysate at 20 µg

Lane 2:
Western blot - Human ANP32B (PHAPI2/APRIL) knockout HEK-293T cell lysate (ab257831) at 20 µg

Lane 3:
Jurkat cell lysate at 20 µg

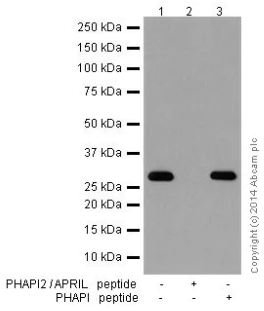
Lane 4:
LNCaP cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/10000 dilution

Predicted band size: 28 kDa

Observed band size: 29 kDa



Western blot - Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free (ab239014)

Blocking/Dilution buffer: 5% NFDM/TBST.
Based on sequence analysis ab200836 has 78% homology with PHAPI protein. The levels of XR were tested in the accompanying blocking experiment.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab200836).

All lanes:
Western blot - Anti-PHAPI2 / APRIL antibody [EPR14588] (ab200836) at 1/1000 dilution

Lane 1:
PC-3 (Human prostate cancer cell line) whole cell lysate at 10 µg

Lane 2:
PC-3 (Human prostate cancer cell line) whole cell lysate at 10 µg with PHAPI2 / APRIL peptide

Lane 3:
PC-3 (Human prostate cancer cell line) whole cell lysate at 10 µg with PHAPI peptide

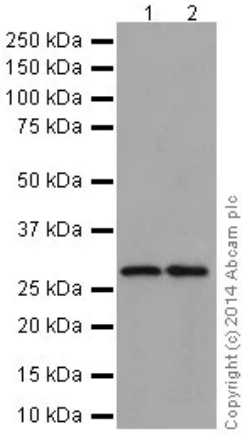
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 28 kDa

Observed band size: 29 kDa

Exposure time: 1min



Western blot - Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free (ab239014)

Blocking/Dilution buffer: 5% NFDM/TBST.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab200836).

All lanes:
Western blot - Anti-PHAPI2 / APRIL antibody [EPR14588] (ab200836) at 1/1000 dilution

Lane 1:
Human fetal heart lysate at 10 µg

Lane 2:
Human fetal kidney lysate at 10 µg

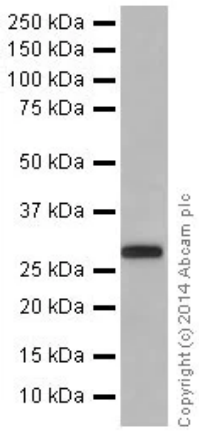
Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 28 kDa

Observed band size: 29 kDa

Exposure time: 30s



Western blot - Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free (ab239014)

PHAPI2 / APRIL Western blot staining of PC-3 (Human prostate cancer cell line) whole cell lysate using rabbit Anti-PHAPI2 / APRIL antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab200836).

All lanes:
Western blot - Anti-PHAPI2 / APRIL antibody [EPR14588] (ab200836) at 1/1000 dilution

All lanes:
PC-3 (Human prostate cancer cell line) whole cell lysate at 10 µg

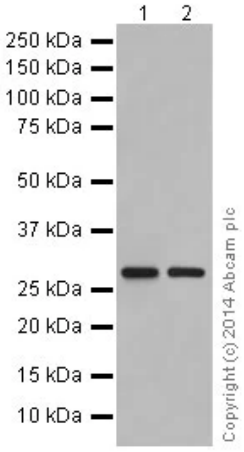
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 28 kDa

Observed band size: 29 kDa

Exposure time: 3min



Western blot - Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free (ab239014)

Blocking/Dilution buffer: 5% NFDM/TBST.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab200836).

All lanes:
Western blot - Anti-PHAPI2 / APRIL antibody [EPR14588] (ab200836) at 1/10000 dilution

Lane 1:
LNCaP (Human prostate cancer cell line) whole cell lysate at 10 µg

Lane 2:
Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysate at 10 µg

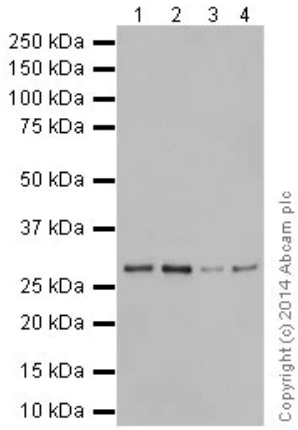
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 28 kDa

Observed band size: 29 kDa

Exposure time: 3min



Western blot - Anti-PHAPI2 / APRIL antibody [EPR14588] - BSA and Azide free (ab239014)

PHAPI2 / APRIL Western blot staining using rabbit Anti-PHAPI2 / APRIL antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab200836).

All lanes:
Western blot - Anti-PHAPI2 / APRIL antibody [EPR14588] (ab200836) at 1/1000 dilution

Lane 1:
C6 (Rat glial tumor cells) whole cell lysate at 10 µg

Lane 2:
RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Lane 3:
PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysate at 10 µg

Lane 4:
NIH/3T3 (Mouse embyro fibroblast cells) whole cell lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 28 kDa

Observed band size: 29 kDa

Exposure time: 15s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.