



# Differentiated ANCA determination using IIFT Mosaics



- **Time and cost savings:** Screening and differentiation in one test
- **Reliable evaluation:** Exclusion of false positive results at a glance
- **Flexibility in the laboratory:** Manual and automated processing

## List of abbreviations

### General

EOH	Ethanol-fixed
HCHO	Formalin-fixed
IIFT	Indirect immunofluorescence tests
NV	Normal value
RU	Relative unit

### IIFT patterns

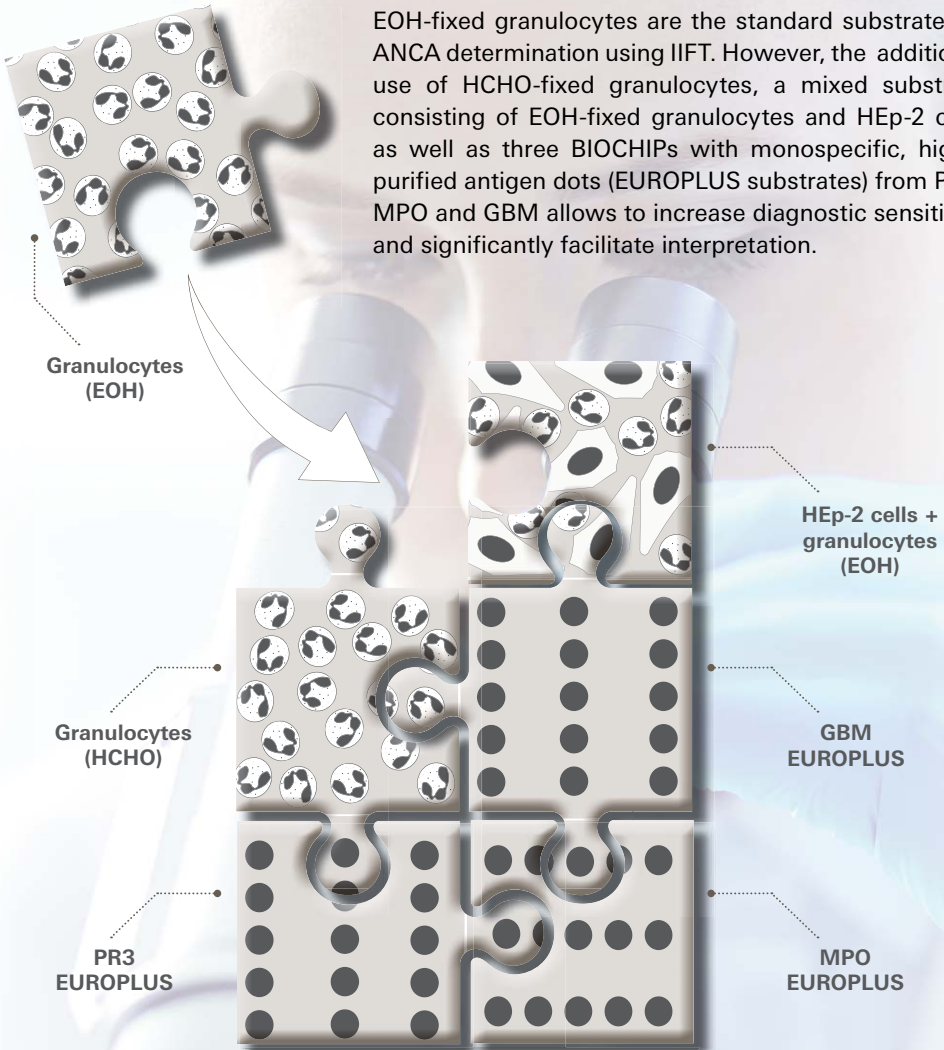
ANA	Anti-nuclear antibodies
ANCA	Anti-neutrophil cytoplasmic antibodies
atyp. ANCA	Atypical pANCA
cANCA	Cytoplasmic ANCA
pANCA	Perinuclear ANCA

### Antigens

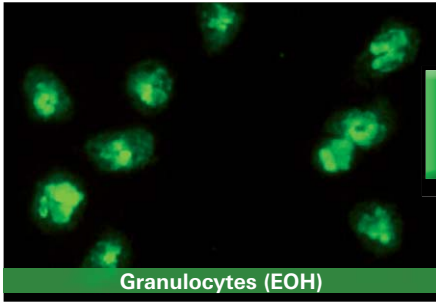
BPI	Bacteria-permeabilising protein
dsDNA	Double-stranded DNA
GBM	Glomerular basement membrane
MPO	Myeloperoxidase
PR3	Proteinase 3

# The EUROPLUS Granulocyte Mosaic 25

EOH-fixed granulocytes are the standard substrate for ANCA determination using IIFT. However, the additional use of HCHO-fixed granulocytes, a mixed substrate consisting of EOH-fixed granulocytes and HEp-2 cells as well as three BIOCHIPs with monospecific, highly purified antigen dots (EUROPLUS substrates) from PR3, MPO and GBM allows to increase diagnostic sensitivity and significantly facilitate interpretation.

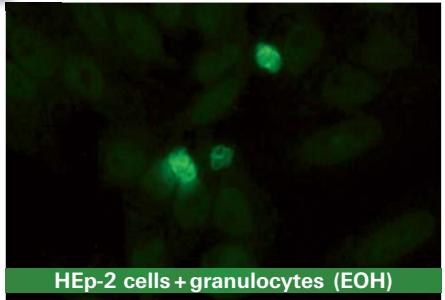


FA 1201-####-25

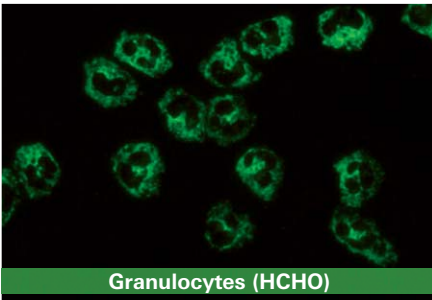


Granulocytes (EOH)

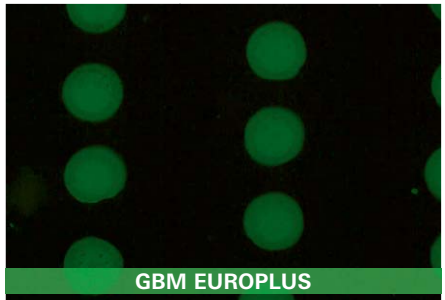
pANCA  
Anti-MPO  
ANA ?



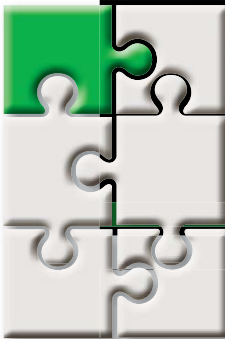
HEp-2 cells + granulocytes (EOH)



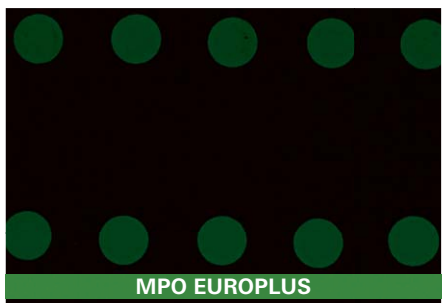
Granulocytes (HCHO)



GBM EUROPLUS



PR3 EUROPLUS



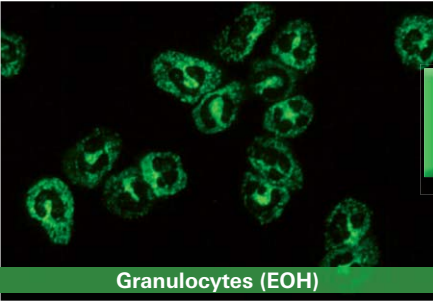
MPO EUROPLUS

**pANCA-positive,  
anti-MPO-positive  
anti-GBM-positive**

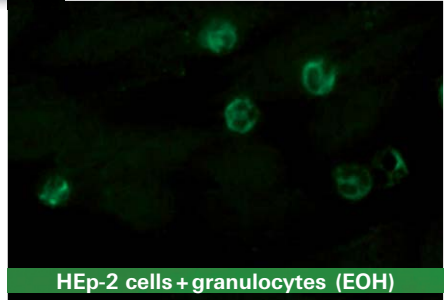


**Further sample information:** Anti-PR3 ELISA: <2RU/ml (NV <20RU/ml), Anti-MPO ELISA: >200RU/ml (NV <20RU/ml), Anti-GBM ELISA: 94RU/ml (NV <20RU/ml), ANCA Profile ELISA: negative for anti-PR3/-lactoferrin/-elastase/-cathepsin G/-BPI, anti-MPO positive ratio 8.7 (NV ratio 1.0), EUROLINE ANA Profile 23 (IgG): negative

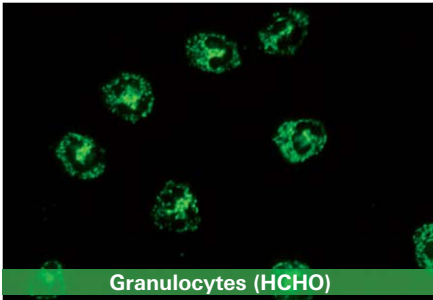
cANCA  
Anti-PR3



Granulocytes (EOH)



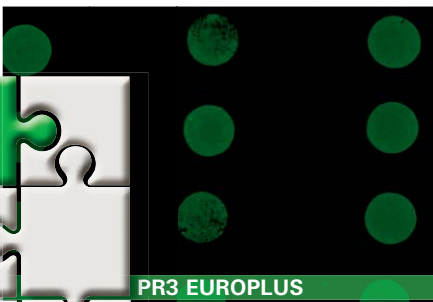
HEp-2 cells + granulocytes (EOH)



Granulocytes (HCHO)



GBM EUROPLUS



PR3 EUROPLUS

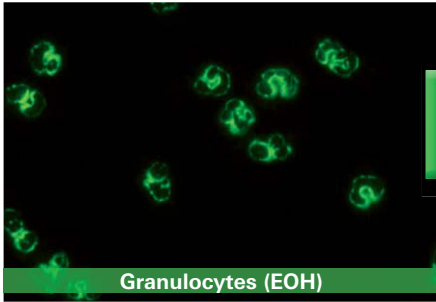


MPO EUROPLUS

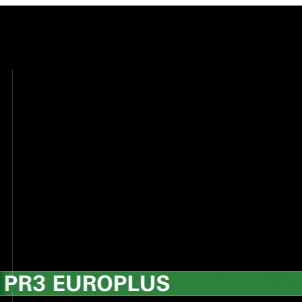
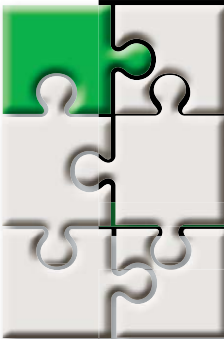
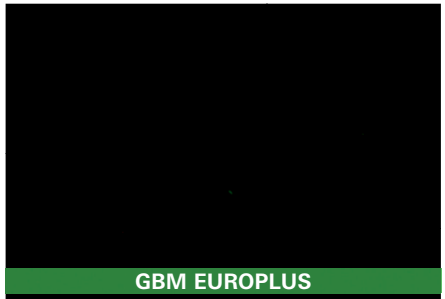
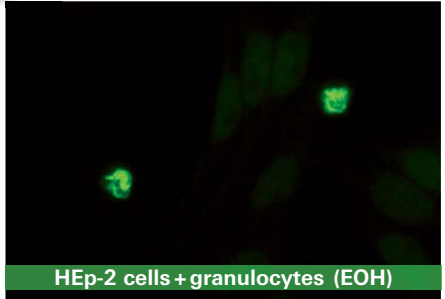
cANCA-positive,  
anti-PR3-positive



No further sample information

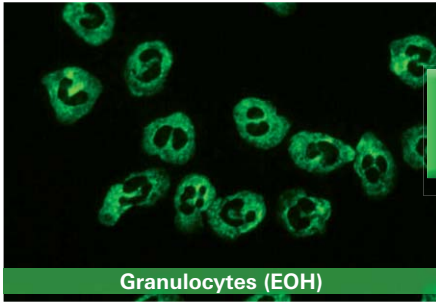


pANCA  
anti-MPO  
ANA ?

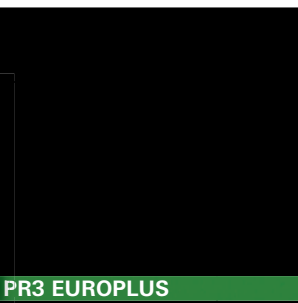
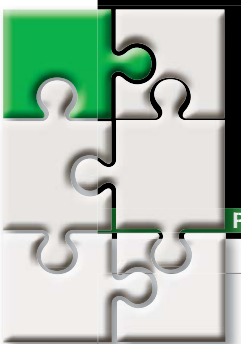
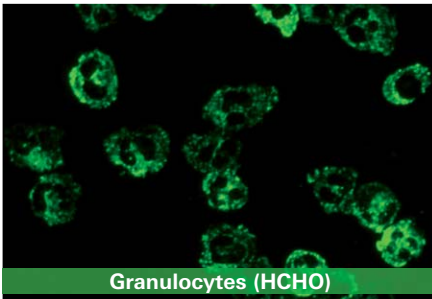
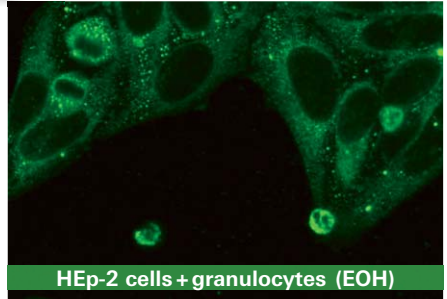


**Atyp. ANCA suspected,  
target antigen unknown** !

**Further sample information:** Anti-PR3 ELISA: <2 RU/ml (NV <20 RU/ml), Anti-MPO ELISA: <2 RU/ml (NV <20 RU/ml), Anti-GBM ELISA: <2 RU/ml (NV <20 RU/ml), ANCA Profile ELISA: negative for anti-PR3/-lactoferrin/-elastase/-cathepsin G/-BPI



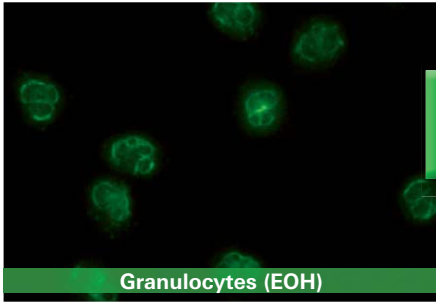
cANCA  
anti-PR3 ?



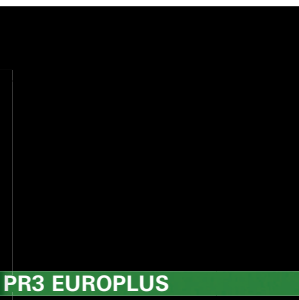
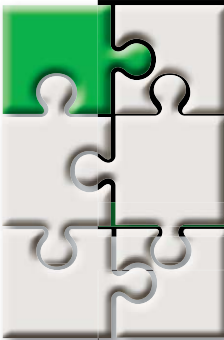
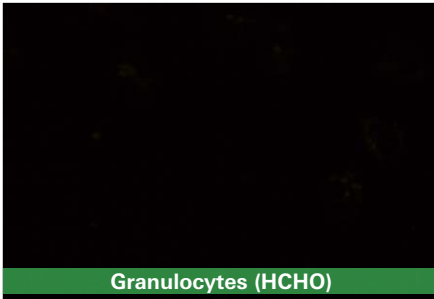
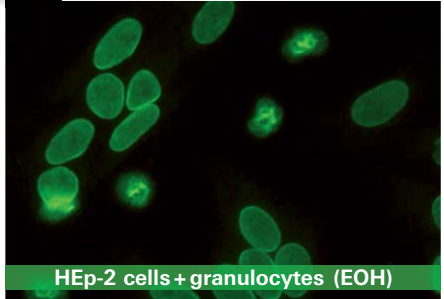
Cytoplasmic pattern on HEp-2 cells →  
ANA suspected



No further sample information



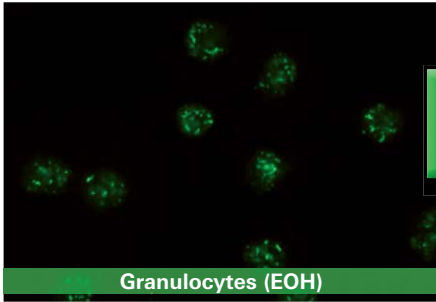
pANCA  
anti-MPO  
ANA ?



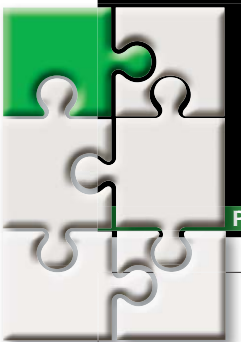
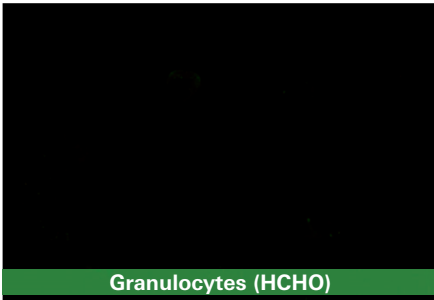
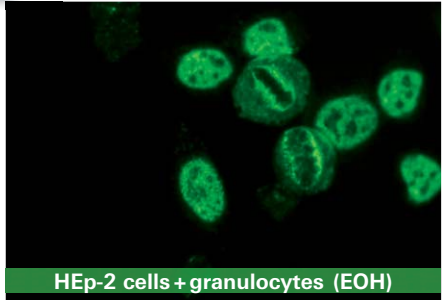
**Nuclear pattern on HEp-2 cells → ANA suspected** !

No further sample information



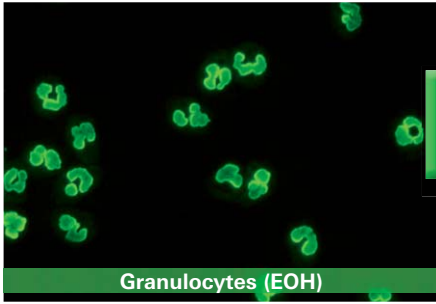


pANCA  
anti-MPO  
ANA ?

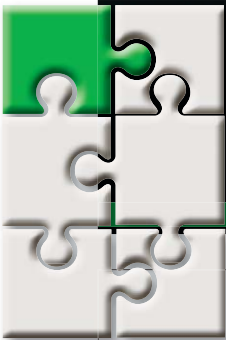
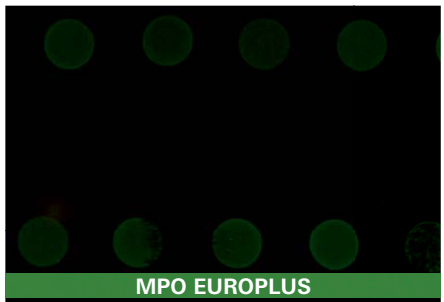
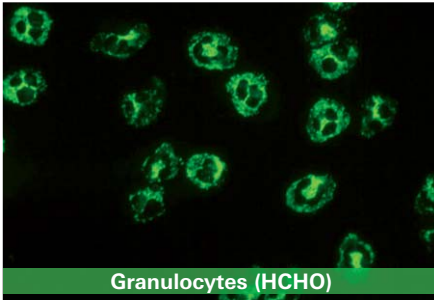
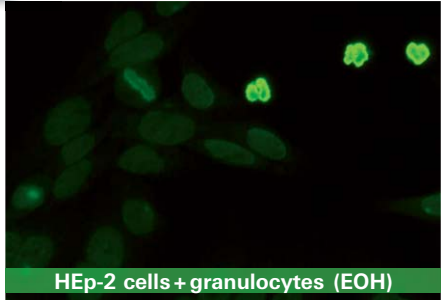


**Granular pattern on HEp-2 cells → ANA suspected** !

No further sample information

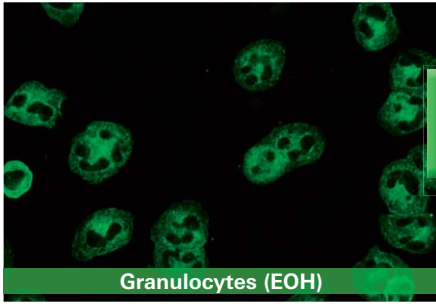


pANCA  
anti-MPO  
ANA ?

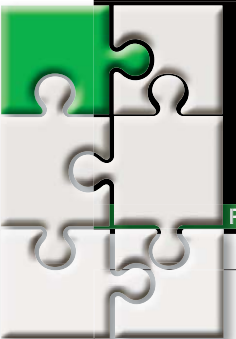
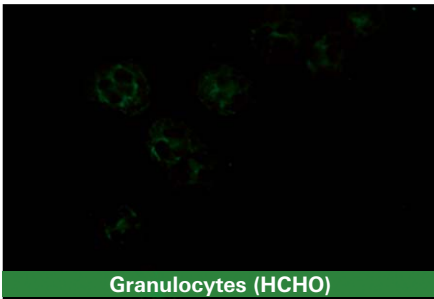
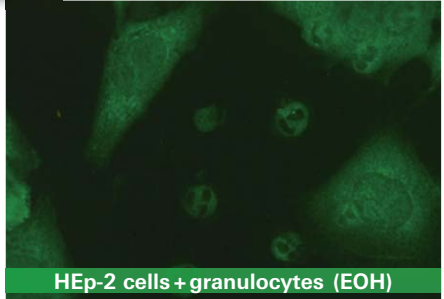


**pANCA-positive,  
anti-MPO-positive,  
nuclear pattern on HEp-2 cells →  
ANA suspected** !

**Further sample information:** Anti-PR3 ELISA: <2 RU/ml (NV <20 RU/ml), Anti-MPO ELISA: 83 RU/ml (NV <20 RU/ml), Anti-GBM ELISA: <2 RU/ml (NV <20 RU/ml), ANCA Profile ELISA: negative for anti-PR3/-lactoferrin/-cathepsin G/-BPI, anti-MPO positive ratio 4.9 (NV ratio 1.0), anti-elastase positive ratio 4,2 (NV ratio 1.0), EUROLINE ANA Profile 23 (IgG): negative



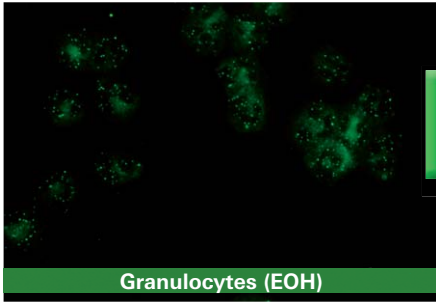
cANCA  
anti-PR3 ?



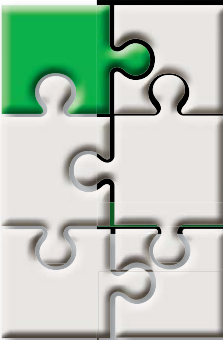
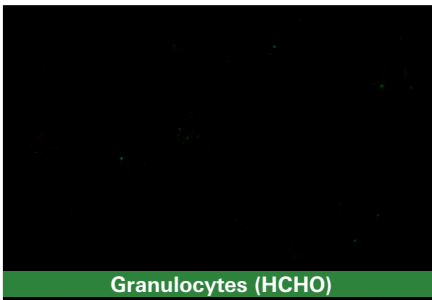
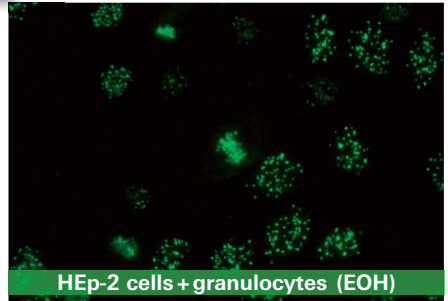
Cytoplasmic pattern on HEp-2 cells →  
ANA suspected



**Further sample information:** Anti-PR3 ELISA: 5 RU/ml (NW <20 RE/ml), Anti-MPO ELISA: 2 RU/ml (NV <20 RU/ml), anti-BPI/-elastase/-cathepsin G/-GBM ELISA: negative, EUROLINE ANA Profile 3: positive for anti-rib. P protein antibodies positive



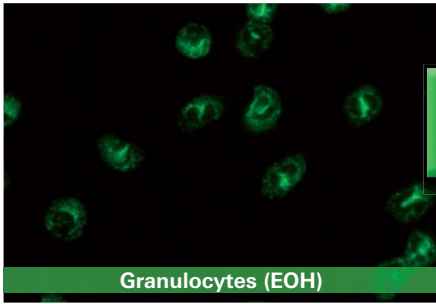
pANCA  
cANCA ?



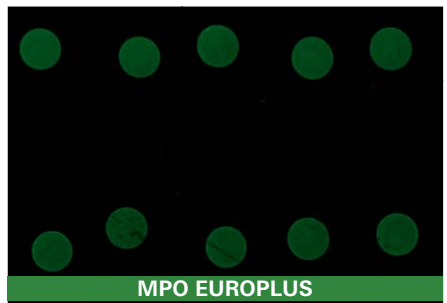
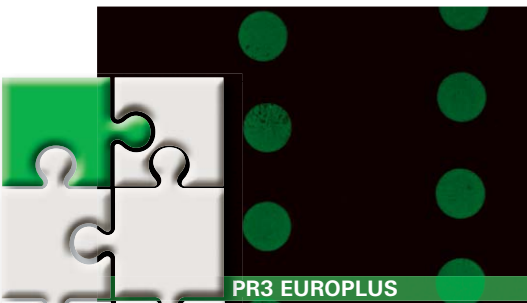
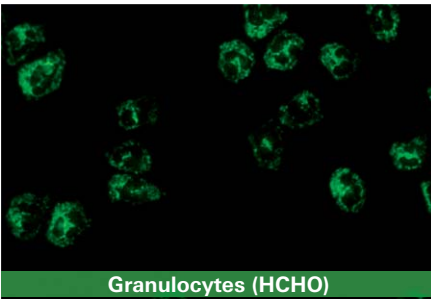
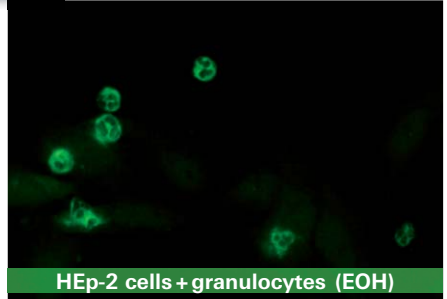
**Nuclear pattern on HEp-2 cells →  
ANA suspected**



**Further sample information:** Anti-PR3 ELISA: 2 RU/ml (NV <20RU/ml), Anti-MPO ELISA: 2 RU/ml (NV <20RU/ml), Anti-BPI/-elastase/-cathepsin G/-GBM ELISA: negative, EUROLINE ANA Profile 3 (IgG): positive for anti-centromere protein B antibodies



pANCA  
cANCA ?

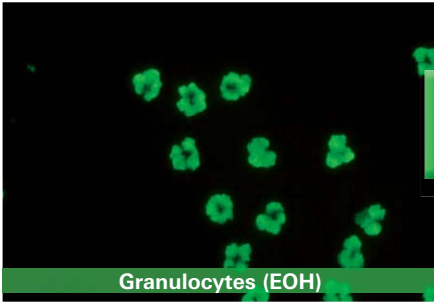


**ANCA,  
anti-PR3- and anti-MPO-positive**

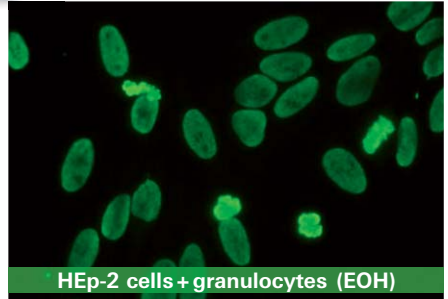


**Further sample information:** Anti-PR3 ELISA: 120RU/ml (NV <20RU/ml), Anti-MPO ELISA: 141RU/ml (NV <20RU/ml), Anti-GBM/-lactoferrin/-elastase/-cathepsin G/-BPI ELISA: negative, EUROLINE ANA Profile 23 (IgG): negative

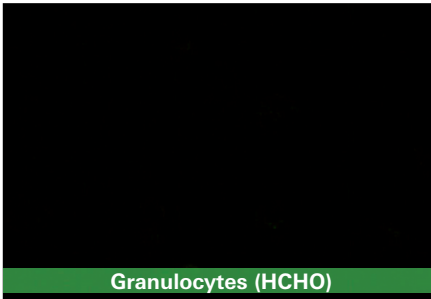
pANCA  
Anti-MPO  
ANA



Granulocytes (EOH)



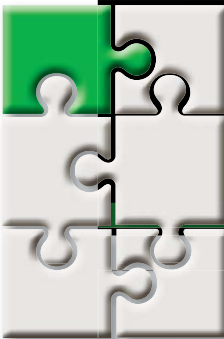
HEp-2 cells + granulocytes (EOH)



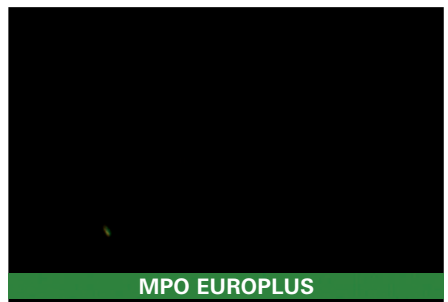
Granulocytes (HCHO)



GBM EUROPLUS



PR3 EUROPLUS

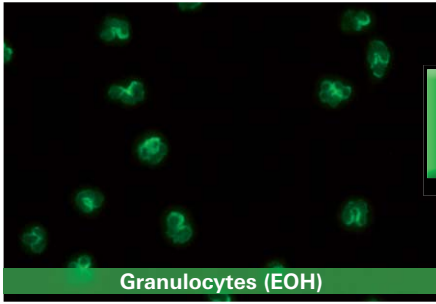


MPO EUROPLUS

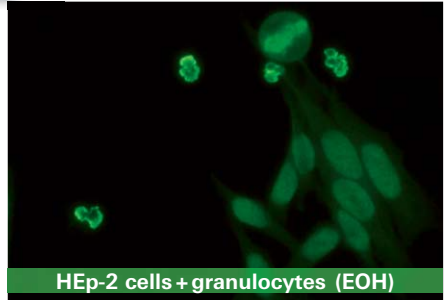
**Nuclear pattern on HEp-2 cells →  
ANA suspected**



**Further sample information:** Anti-PR3 ELISA: <2 RU/ml (NV <20 RU/ml), Anti-MPO ELISA: <2 RU/ml (NV <20 RU/ml), Anti-lactoferrin/-elastase/cathepsin G/-BPI/-GBM ELISA: negative, EUROLINE ANA Profile 23 (IgG): anti-nucleosome positive



pANCA  
Anti-MPO  
ANA ?



**Atyp. ANCA suspected,  
nuclear pattern on HEp-2 cells →  
ANA suspected**



**Further sample information:** Anti-PR3 ELISA: 5 RU/ml (NV < 20RU/ml), Anti-MPO ELISA: 3 RU/ml (NV < 20RU/ml), Anti-GBM ELISA: < 2 RU/ml (NV < 20RU/ml), ANCA Profile ELISA: negative for anti-PR3/-lactoferrin/-MPO/cathepsin G/-BPI, anti-elastase positive ratio 4,5 (NV ratio < 1.0), EUROLINE ANA Profile 23 (IgG): elevated anti-histone antibodies



## Further IIFT products for ANCA determination

Order no.	Substrate
FA 1200-####	Granulocytes (EOH)
FA 1201-####	Granulocytes (HCHO)
FA 1201-####-2	Granulocytes (EOH), granulocytes (HCHO)
FA 1201-####-13	Granulocytes (EOH), granulocytes (HCHO), HEp-2 cells + granulocytes (EOH)
FA 1201-####-15	Granulocytes (EOH), HEp-2 cells + granulocytes (EOH)
FA 1201-####-22	Granulocytes (EOH), granulocytes (HCHO), PR3 and MPO EUROPLUS
FA 1201-####-32	Granulocytes (EOH), granulocytes (HCHO), HEp-2 cells + granulocytes (EOH), PR3 and MPO EUROPLUS

## UNIQQ 160

### All-in-one IIFT automation



**UNIQQ 160**  
EASY. EFFICIENT. EXCEPTIONAL.

Full automation from primary sample to result proposal



Reliable IIFT results in just two steps:

1. **Sample loading**
2. **Computer-assisted IIFT evaluation**

