

بيوشيمي باليني

جلسه نهم

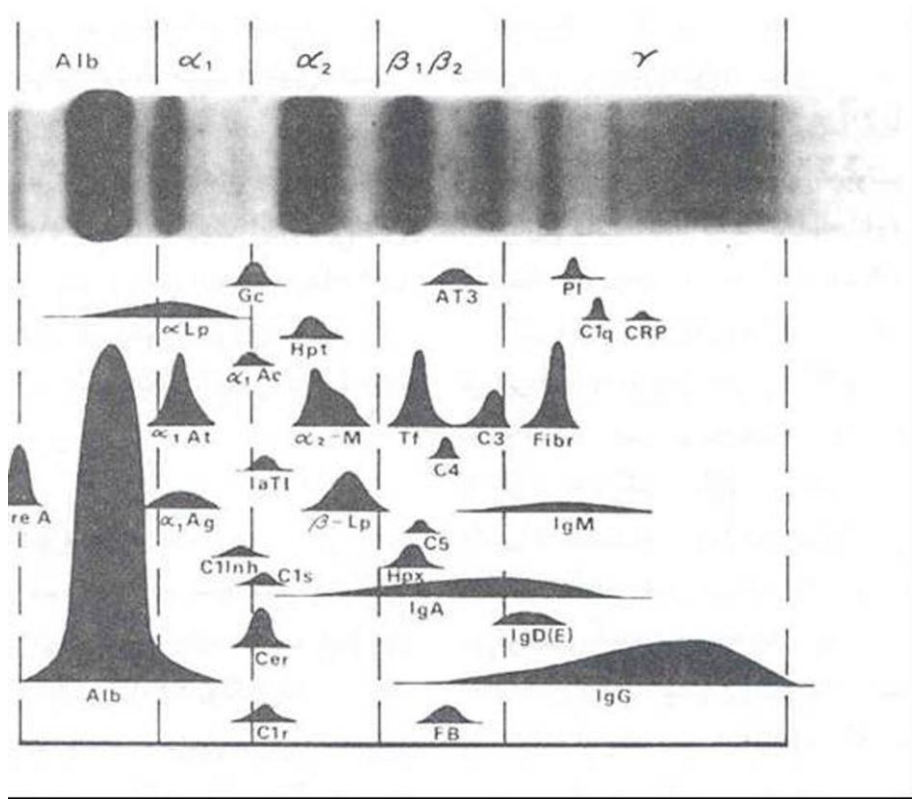
joshaghanihr@goums.ac.ir

عناوین این جلسه

پروتئین های اختصاصی پلاسما

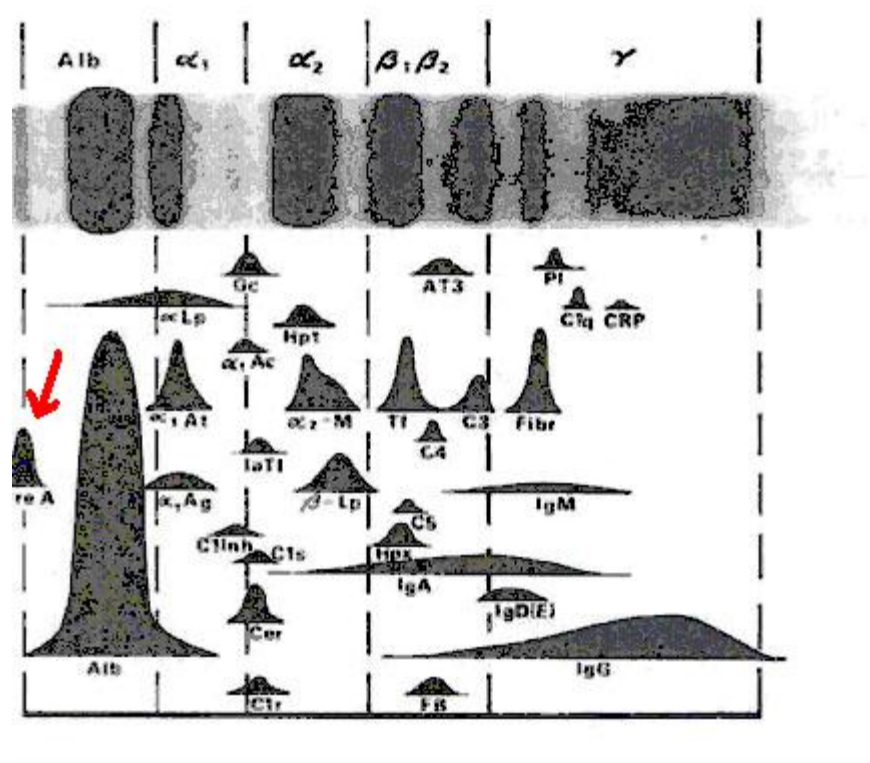
تغییرات غیر طبیعی پروتئین ها

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پره الیومین



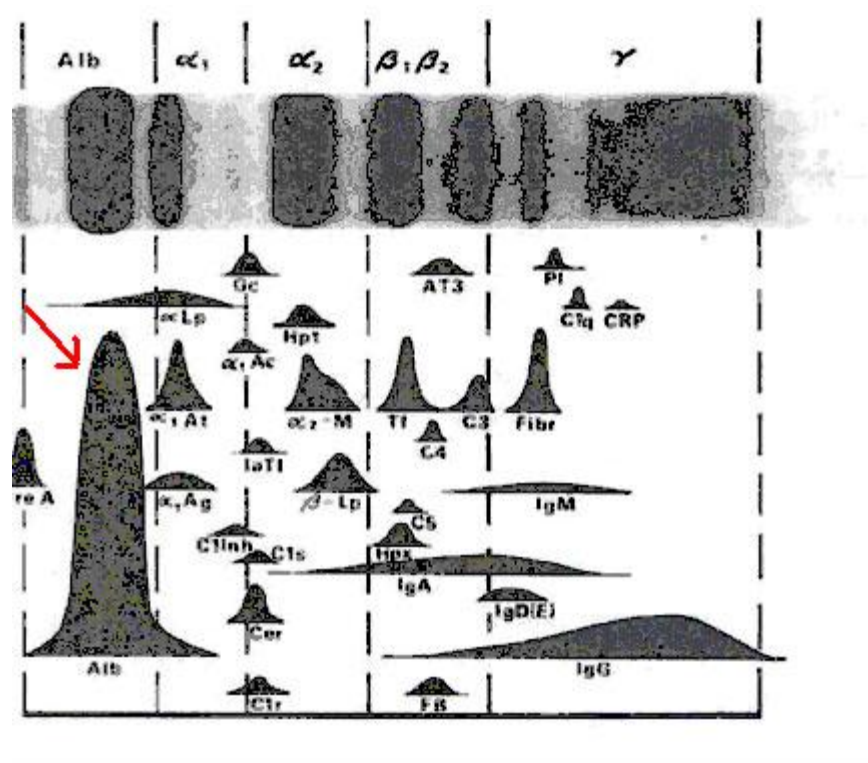
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پره البومين

- MW= 62000
- Tetramer
- Each monomer  1 Tyroxine (TBPA)
- Pre alb  RBP + Vit A
- 182 aa 
- Rich of Trp
- Beta sheet
- ~ 2 days
- Best method for detection = immunologic & nephelometric

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آلبومين



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ألبومين

- MW= 60000
- ~ 17 days
- Functions:
 - Oncotic pressure
 - Carrier protein
 - Reservoir for aa

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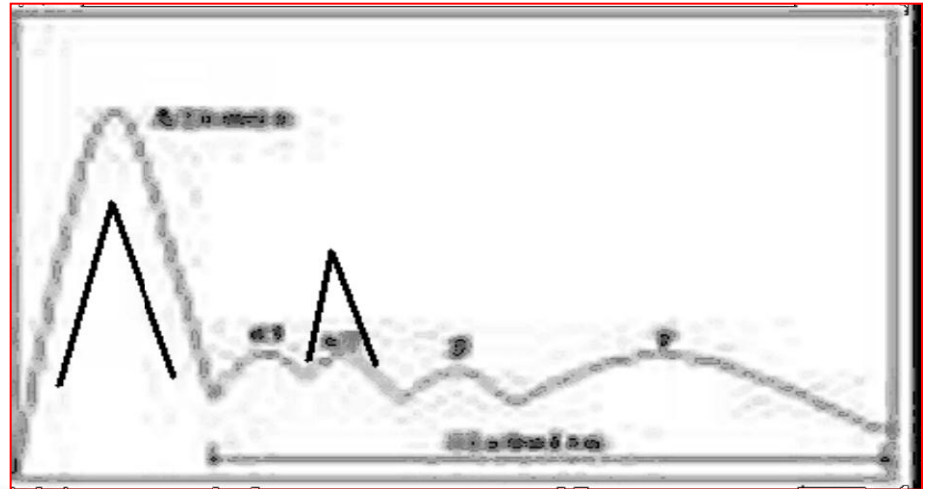
ألبومين

- Carrier protein function of Alb
 - Thyroxin
 - Bil
 - Cortisol
 - Ca
 - Estrogens
 - FFA
 - Mg
 - Cu
 -

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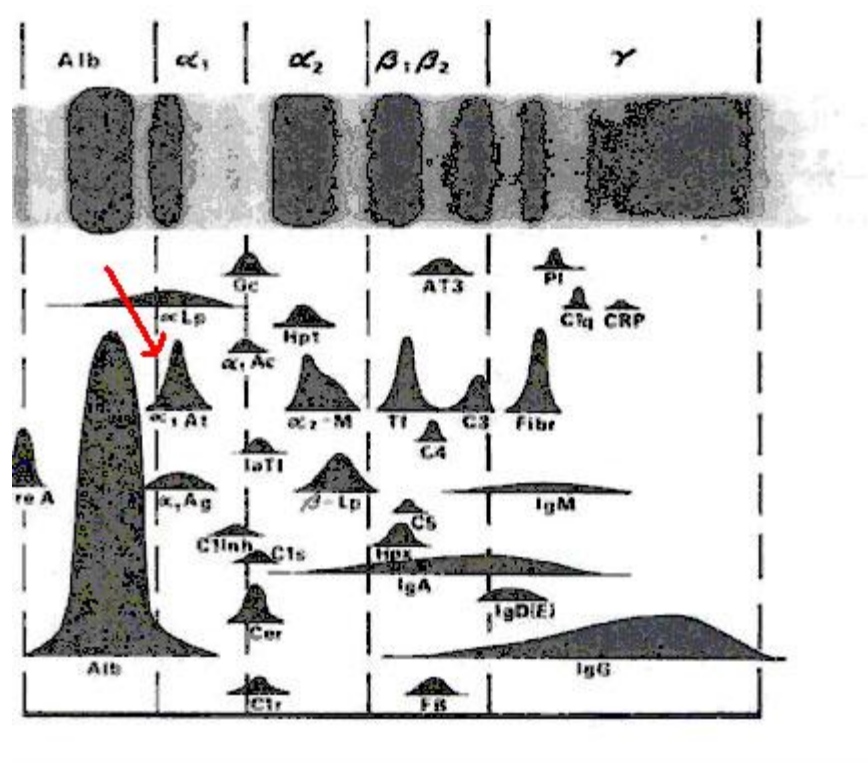
آلبومين

- Glycolated Alb = Fructosamine
 - In Cyclic cell anemia, Thal & Hemolytic disease is useful
- Syndrom nephrotic



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α_1 - آنتي تريپسين



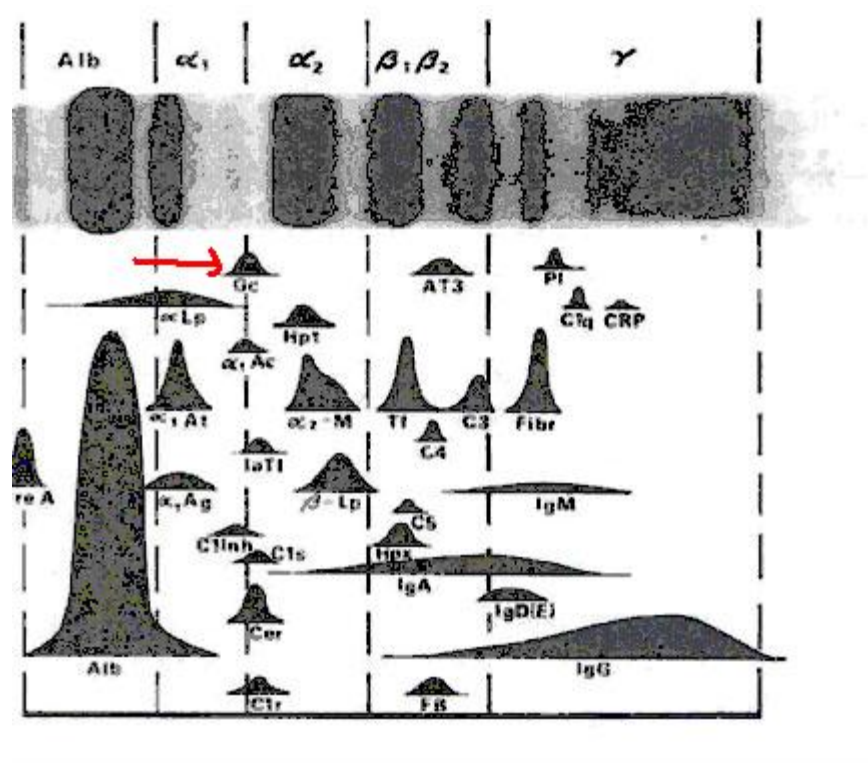
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α_1 -آنتي تريپسين (AAT)

- 3 phenotype : MM, MZ, ZZ
- Emphysema & cirrhosis
- Acute phase protein






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Gc - گلوبولین

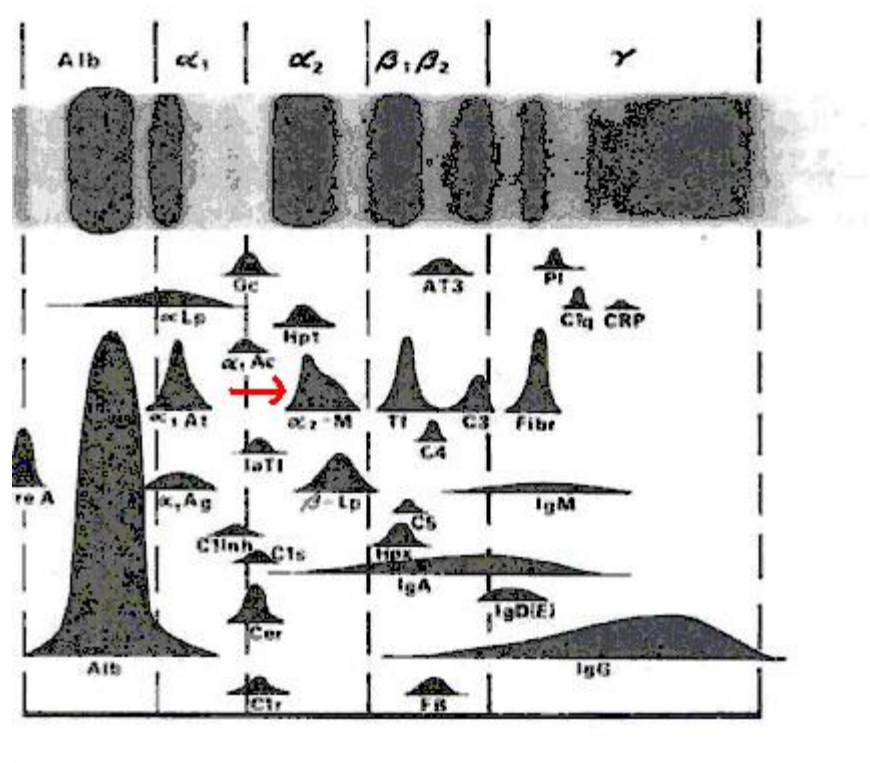


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Gc-globulin (DBP)

- MW=51000
- Phenotype: 1-1, 2-2, 1-2
- Each DBP  1 Vit D
- Syndrom nephrotic   DBP   Ca

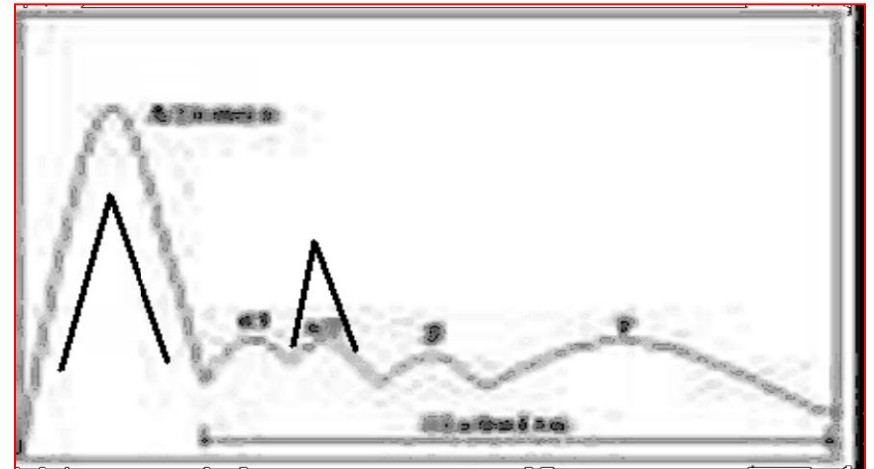
α_2 - ماڪرو گلوبولين



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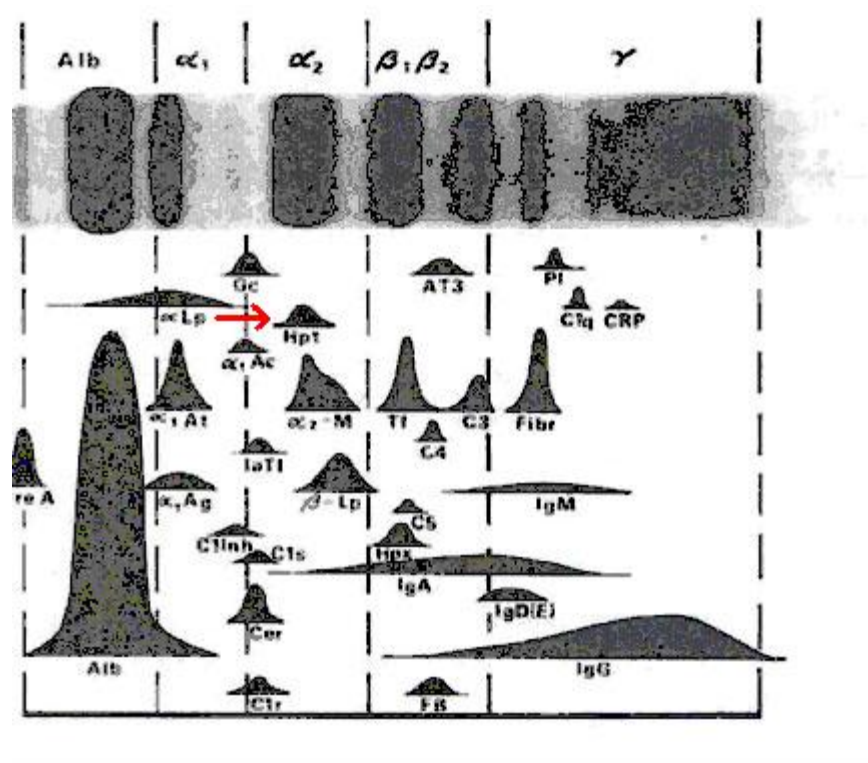
α_2 -مکروگلوبولین (AMG)

- MW = 725000
- Inhibitor of proteases
- Syndrom nephrotic ↑




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هایتوگلوبین



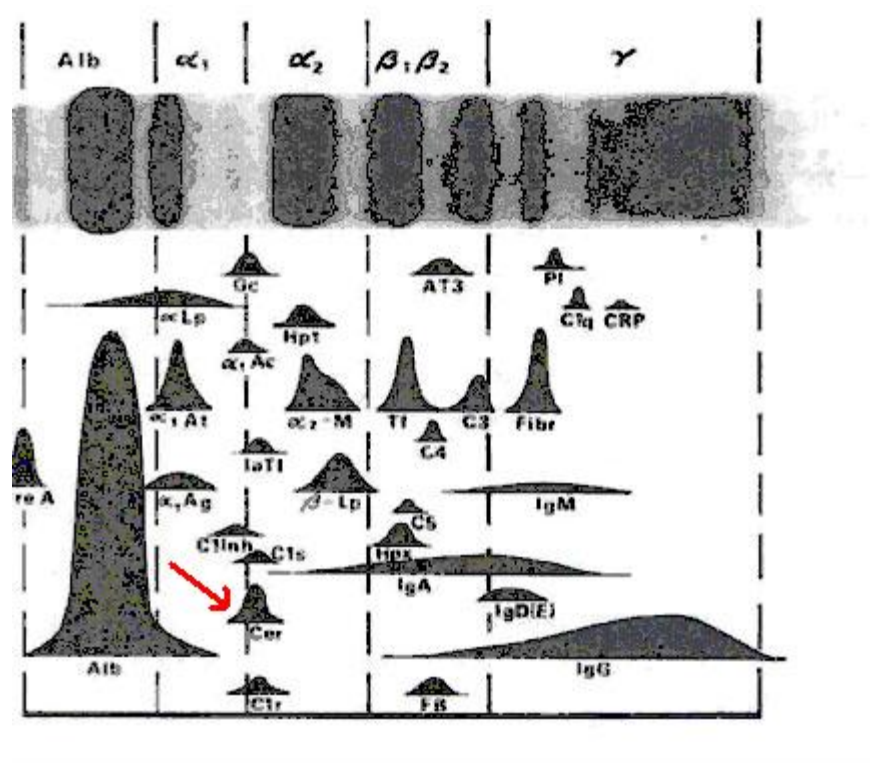
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هایپوگلوبین (HP)

- MW=
- ~ 4 days
- HP  Hb
- In intra venous hemolytic disease
- Phenotype : 1-1, 1-2, 2-2
- Acute phase protein





سروپلاسمین



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سرولوپلاسمین (Cer)

- MW= 132000
- Cer  6 Cu
- Oxidase enzyme
- $Fe^{2+} \longrightarrow Fe^{3+}$
- Contraceptive drug & pregnancy 
- Acute phase protein
- Wilson disease

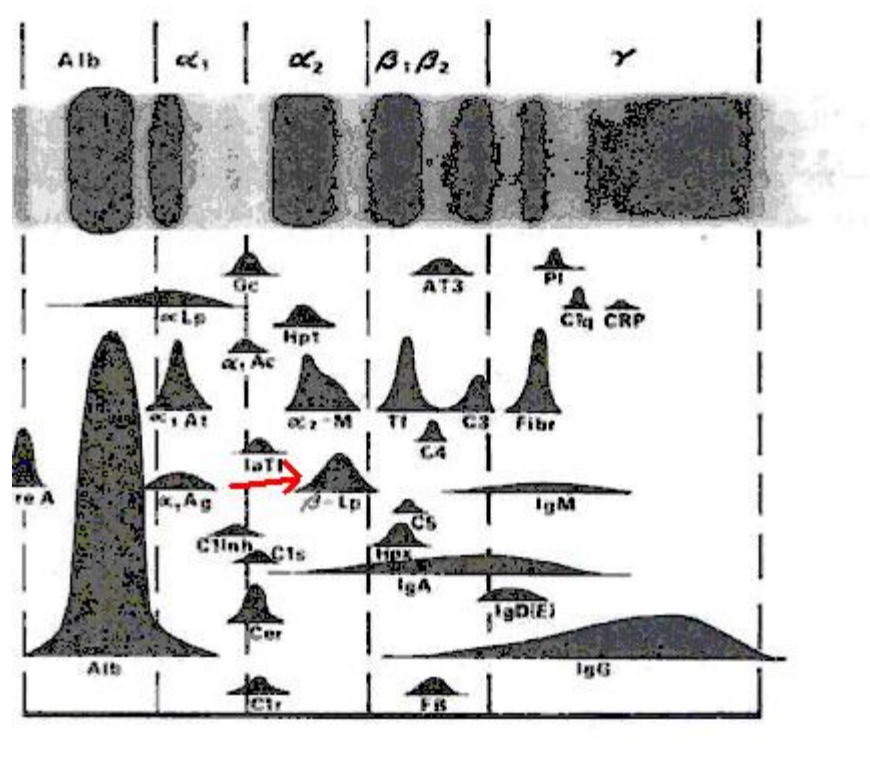
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Wilson disease

- Serum Cer ↓
 - Serum Cu ↓
 - Urine Cer ↓
 - Urine Cu ↑
-
- Kayzer – Fisher ring

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بتا - لیپوپروتئین






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بتا - لیپوپروتئین

- LDL
- Position of band variable in fasting & eating

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ترانسفرین

- MW=79550
- A glycoprotein 
- Each transferrin 2 Fe
- Serum normal range: 200-400 mg/dl (TIBC)
- In Iron deficiency & pregnancy
 - Iron 
 - TIBC 

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هموڪروماتوز

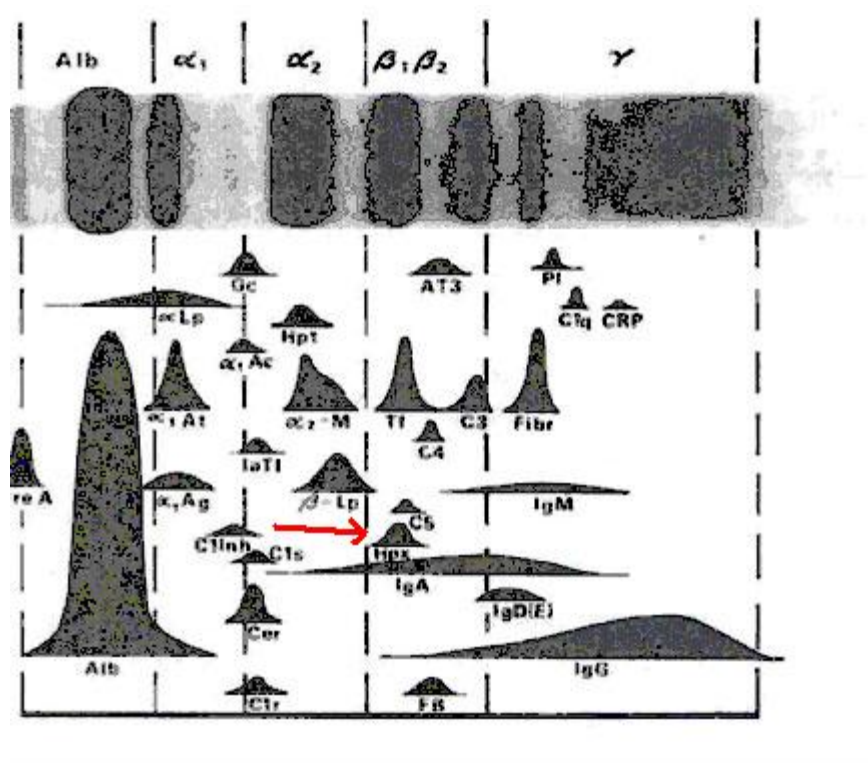
- Percipitation of iron
 - Cirrhosis
 - Diabetes
 - Cardiomyopathy
 - Arteritis

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- $TIBC = UIBC + \text{Iron}$
- Saturated percent (%) = $(\text{Iron} / TIBC) \times 100$
- In normal condition: 30% transferrin saturated
- Asialotransferrin in CSF,,

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هموپکسین



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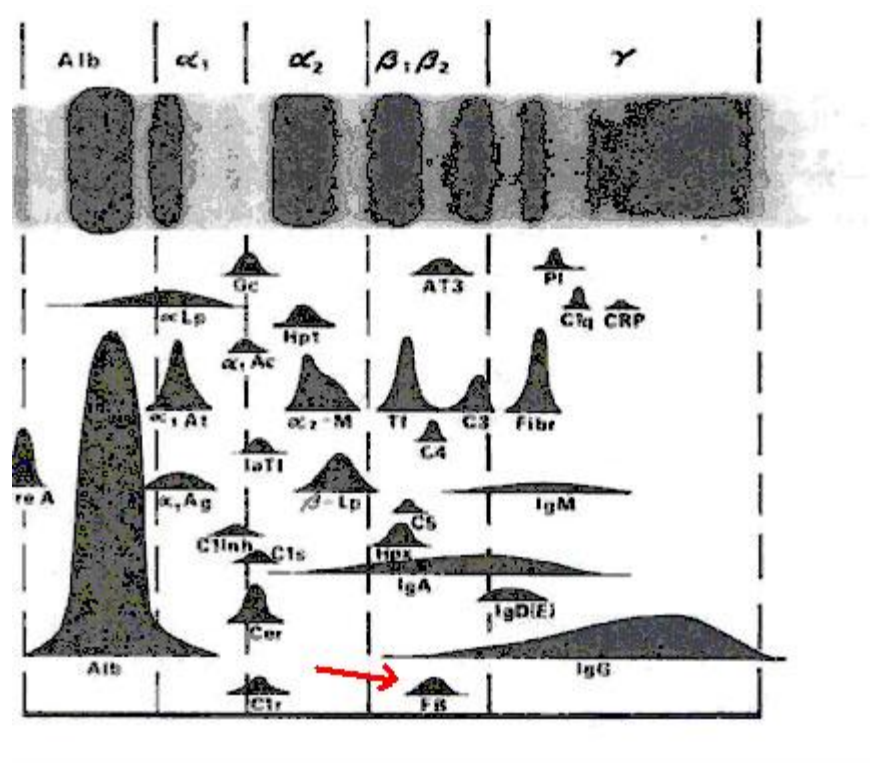
- MW=70000
- Glycoprotein
- Hemopexine



Heme

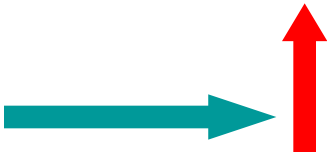
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فیبرینوژن

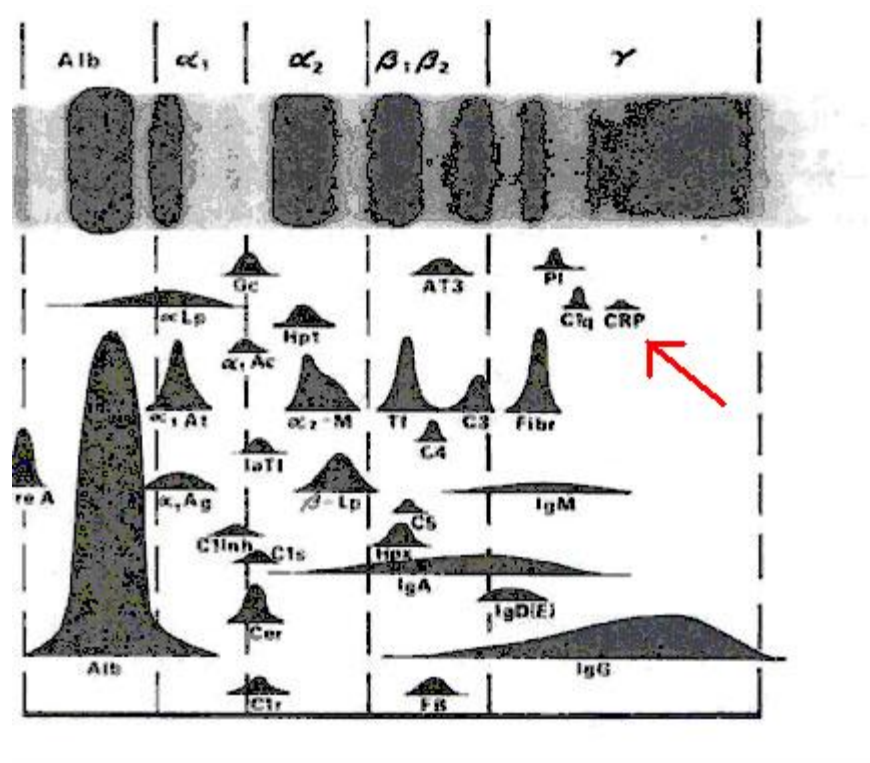


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فیبرینوژن

- Band between beta & gama
- MW= 340000
- plasma normal range: 100-400 mg/dl
- Dimer (a- α , B- β , γ)
- Acute phase protein  ESR

CRP



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CRP

- MW= 118000-144000
- Glycoprotein
- Serum normal range: 470-1340 ng/dl
- Acute phase protein

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