

Acceptable ABO/RhD Substitutions for Blood Products – PEDIATRICS

| Component | Patient ABO Group | Preferred Product ABO Group | Acceptable ABO Substitutions | Patient RhD Type | Acceptable RhD Substitution | Rationale |
|--|-------------------|-----------------------------|------------------------------|------------------|-----------------------------|---|
| Whole Blood | O | O | None | Rh-positive | Rh-negative | Must always be identical to patient. |
| | A | A | | | | |
| | B | B | | | | |
| | AB | AB | | | | |
| Red Blood Cells | O | O | None | Rh-positive | Rh-negative | Red cells must be compatible with the antibodies in patient's plasma. |
| | A | A | O | | | |
| | B | B | O | Rh-negative | None | |
| | AB | AB | A, B, O | | | |
| Plasma (FFP, PF24, Thawed Plasma, Liquid Plasma) | O | O | A, B, AB | Rh-positive | Rh-positive or negative | Antibodies in the transfused plasma must be compatible with patient's red cells. |
| | A | A | AB | | | |
| | B | B | AB | Rh-negative | | |
| | AB | AB | None | | | |
| Apheresis Platelets | O | O | Any ¹ | Rh-positive | Rh-negative | If platelets are volume-reduced, any ABO group is acceptable for transfusion. Follow hospital policy. |
| | A | A | AB, B, O ¹ | | | |
| | B | B | AB, A, O ¹ | Rh-negative | See below ² | |
| | AB | AB | A, B, O ¹ | | | |
| Cryoprecipitate | O | O | Any | Rh-positive | Rh-positive or negative | Antibodies in the transfused plasma must be compatible with patient's red cells. |
| | A | A | AB | | | |
| | B | B | AB | Rh-negative | | |
| | AB | AB | None | | | |

1. Transfusion of incompatible plasma should be avoided in children, especially in infants. Platelets whose plasma is incompatible with recipient's red cells should be volume-reduced as significant hemolysis has been reported. Follow hospital policy.

2. Female pediatric patients who are Rh-negative should receive Rh-negative platelets. If unavailable and Rh-positive platelets are given, administration of RhIG should be considered for prevention of RhD alloimmunization based on hospital policy.
Reference: AABB Technical Manual, current edition